Globalisation, Europeanisation, Place Embeddedness. New Developments within Production Networks and Territorial Implications

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Abstract

A central question in economic geography today is whether the globalisation of the economy is shifting the relationship between economic activity and space to different kinds of territories. Some argue that globalisation implies that territories, especially nation-states, lose their meaning in an economy dominated by large transnational corporations forming global networks in a 'spaceless, 'placeless' world. At the same time, however, we find arguments that suggest that territory, not least the local environment, is becoming increasingly important for the competitiveness of many firms and corporations. In an analysis of new competitive strategies related to production networks, these arguments are further discussed. A concluding sector of the article focuses on the changing role of the nation-state and how 'transnational' the corporations really are.

Introduction

For over ten years now, transformations in the international economy have gone under the banner of 'globalisation'. The term, however, is not entirely unproblematic, and over the past few years there has been an extensive debate examining the extent to which this term can be considered a myth or reality[1]. There are many facets to this discussion but two are of particular interest here. The first point concerns the relationship between space and the economy, while the other underlines the role of the nation state. In this paper the focus is placed directly upon the development of and the forces determining industrial production, more specifically production networks as a central component of a globalising economy. To conclude the role of the nation state will be discussed accordingly.

In the past much attention was paid to the 'internationalisation' of the economy, alluding to the increasing number of cross-border links and transnational trade patterns, and to the fact that economic activity was no longer confined to the same extent within national boundaries. When applied to industry, 'globalisation' can be regarded as a more advanced form of internationalisation, implying the functional integration of different types of economic activity[2]. It is apparent that an increasing number of nations are involved in trade, production and direct investment, although admittedly the extent and form of involvement differs. When examining industrial production in particular, it is often organised in the form of multinational networks. A more complex product, such as the passenger car, for example, is the result of the work of many thousands of firms/production units, located in North America, Asia and Europe. The logic behind the global, industrial division of labour is also reflected in trade and investment patterns.

At the same time, however, it is apparent that the process of globalisation is not entirely global in its reach. It is still the case that the majority of trade and direct investment occurs between developed countries which together form the global triad, namely North America, Europe and Japan. What is more, over the past twenty years this trend has been on the increase. At present 75% of trade and investment takes place between these countries. In 1953 95% of the world's industrial production was based in these core

countries, while forty years on the equivalent figure was 80%. This indicates a significant distribution of industrial production which deviates slightly from comparable developments in trade and investment. A handful of countries, above all South Korea, Taiwan, Brazil, Mexico and more recently China, are responsible for this increase in industrial production outside the developed countries. Even if NIC countries, South Korea and Taiwan in particular, as well as other less developed nations in south-east Asia, have demonstrated rapid development, changes in the patterns underlying this development and in the dependency relationship existent between core, semi-peripheral and peripheral countries have been minor and relatively slow in progress. The situation can of course change over the next few decades, not least depending upon development in China, but also in neighbouring countries in south-east Asia, which are currently in the throes of economic crisis. The central point of reference in the following discussion about globalisation must, however, be the fact that production, trade and investment are concentrated in a limited number of dominant nation states and blocks of nations. This is not to mention the control these few states exert over such flows of economic activity. The number of significant actors in the global economy is further reduced if one takes into account of the location of R&D activity and technological development.

In other words, the term globalisation employed here refers to a process and not a condition. The following discussion assumes the aforementioned focus on globalisation as a process. It is not, therefore, a question of whether we live in a globalised world or not. It is more a question of what organisational, geographical and political form the process of globalisation (according to the definition given above) takes in terms of the economy. Another element important for the understanding of the following discussion is that globalisation is not a straightforward, unequivocal process, and neither is it possible to predict the final outcome of such a process. Such a deterministic standpoint, that is to say treating globalisation as a state i.e. a globalis*ed* economy rather than a process, would tend to limit the debate as well as act to veil the complexity and the contradictions inherent in the process of globalisation[3].

If we take a look at industry in Sweden, the term 'europeanisation' can also be included in the terminology employed here, referring to the heightened importance of economic activity in Europe. 'Europeanisation' is a process which has long since influenced Swedish transnational corpora-

tions, Europe being the most significant market in terms of trade and investment. Certain branches, such as the engineering industry, have long since been active in the European market, while the forestry industry on the other hand did not really get a foothold until the mid 1980s. This process has accelerated during the 80s and early 90s in conjunction with ongoing integration in the EU when Sweden was not yet a member of the Union. In other words, 'europeanisation' should not be seen as a process which affects all sectors in the same way. Nowadays, however, the process of europeanisation is of much greater influence, especially where small and medium sized firms are concerned. In many cases the effects are revolutionary. Above all this applies to subcontractors within this category of firm. Analyses largely examining the automobile industry indicate that even this industry is undergoing a process of 'europeanisation', whereby production networks which have largely been nation based are becoming more European in reach.

Parallel to these transnational processes (across national borders), which include transnational corporations often seen as borderless, stateless entities, as well as the information technology based community supposedly 'hollowing out' the significance of both time and space, we see that the ties between firms and their regional environment are growing stronger rather than diminishing. This can at first seem paradoxical, but as will be demonstrated, it is a relationship which is entirely compatible with the process of europeanisation. The process described above can be regarded rather as different facets of an interwoven development process. The importance of *regional ties* is not, however, something which is characteristic of all types of firm. Some firms are more dependent on the regional environment than others. What is more, the factors which are considered important in the local/regional environment can vary to a considerable degree, depending on the type of firm[4]. The significance of dense areas of economic activity which incorporate large numbers of similar firms is an important competitive advantage for knowledge intensive enterprises. Highly concentrated areas of economic activity, agglomerations and clusters[5] provide favourable conditions for the establishment of networks and other forms of co-operation. The point being made here is that despite the extent to which a firm or an industrial branch can be considered global in character, strong ties often exist between these firms/branches and the local/regional 'home base'.

Key concepts in this discussion are for example, industrial districts, local clusters, 'learning regions' and regional innovation systems[6].

The central question put forward in this paper is how these parallel geographical processes can be influenced by the emergence of new competitive strategies. Particular interest is focused on strategies behind production networks and the competitive market position of firms. The majority of empirical evidence in support of the following discussion is taken from roughly 60 case studies[7] carried out covering Swedish industrial firms located in the South of Sweden.

Production networks, development characteristics and strategies

The point of departure when discussing the strategies behind production networks is the firms within these networks and the different roles they assume and the varying degree of power they deploy. Here particular importance is attached to two particular types of firm, manufacturers of finished goods and subcontractors of components or sub-system goods.

Initial conditions and development characteristics

In many branches production systems have been, traditionally speaking, nation based. As time passes, however, the geographical reach of these systems becomes increasingly extensive. Occasionally these systems are global in reach, but the majority are still multinational rather than truly global. The local/regional ties found within these systems are often weak, despite all the talk about the significance of agglomerations and clusters. In a study carried out in South East Sweden (the counties of Blekinge, Kronoberg and Kalmar) only ten per cent of firms' major subcontractors were based in the home region, (the regional definition employed here is the Swedish labour market region)[8]. If the home region is expanded to incorporate the

whole of the South East of Sweden then 20 per cent of subcontractors are located within the region. If the rest of the Swedish market is taken into consideration, only 40 per cent of the firms' subcontractors are accounted for, implying that the remaining 40 per cent are of a different nationality. The equivalent figure for large firms within the engineering industry is roughly half. The single most important 'supplier' nation is Germany, while countries outside Europe only account for eight per cent, which means that over 90 per cent of subcontractors to the firms included in the study are located in Europe.

A very clear element in the strategies pursued by final producers in the 1990s was to establish closer links with their subcontractors from a functional point of view. On the other hand, the larger European corporations are demonstrating a tendency towards vertical disintegration, or 'outsourcing' as it is known. There are a great many examples of how large firms within the Swedish engineering industry endeavour to develop some form of '*partnership*' with their subcontractors, while at the same time reducing the number of these partnerships within the production network, i.e. maintaining those links considered to be of most strategic importance. Ericsson, Volvo, Saab and Electrolux among others are a few examples of firms which have reduced the number of subcontractors in the production network. In reality this translates into fewer *direct* links within the production network. Volvo had, for example, almost 1500 suppliers in 1960, which delivered directly to Volvo. The equivalent figure for 1997 was 358[9]. The division between first, second and third tier subcontractors within production systems is becoming increasingly defined, as is the division between system subcontractors and subcontractors of components and parts. A greater degree of responsibility for the coordination of operations in the production system is accordingly parcelled out from the final producers to the first level and system subcontractors.

The level of dependency versus freedom in the relationship between the principal firm and its subcontractors is, however, a question of balance. Subcontractors are often encouraged by many large firms to avoid becoming too dependent on one customer and instead are encouraged to build up channels with a larger number of firms. As a result development possibilities increase which is beneficial for the production system as a whole, while at the same time the vulnerability of the system diminishes. The latter point is especially true with regards to smaller subcontracting firms. In this way

they are not dependent upon the fluctuations in demand from *one single* customer. Many large firms, for example, Volvo and IBM have expressed themselves very clearly on this point.

Another component which further complicates the relationship between large firms and their subcontractors is the fact that many large firms, particularly within the engineering industry, have turned to single-sourcing i.e. where certain components or sub-assemblies goods are provided by a single subcontractor. This kind of system can lead to stronger and more prolonged relationships between firms. On the other hand the position of the firm relying on deliveries from a single supplier is weakened as a result. It is interesting to note here that the *flexibility* associated with final production and as far as the target market is concerned demands a substantial level of *rigidity* or rather *stability* in terms of the construction of production systems.

The extent of relationships between large final producers and their subcontractors has clearly intensified over the past ten years as has the importance attached to continuity, long-term thinking and trust. Relationships of this kind are the first step towards establishing successful forms of advanced collaboration. The scenario where large firms play off subcontractors against each other in the bid for more competitive prices is of limited relevance here and is above all applicable to simpler forms of industrial production characterised by a low intensity knowledge base. (Smaller subcontracting firms are otherwise constantly under pressure from the large customers to reduce prices, something which reflects the true balance of power within production systems).

JIT and ISO

Two concrete moves towards the aforementioned 'partnership' have been the implementation of advanced delivery systems, often known as Just-in-Time (JIT), and the introduction of a system ensuring quality standards, which during the 1990s has largely taken the form of various ISO-systems. In both cases the demands placed upon all actors involved in the production systems are heightened. In short JIT systems imply that all levels of

production should be co-ordinated, as far as possible, in conjunction with customer orders. Consequently heavy demands are placed both on the internal organisation of the firm as well as on employees and the techniques applied in production. Components and sub-assembly goods should only be manufactured according to demand and should be delivered at a certain date and time. JIT systems also incorporate demands for quality control, that is to say that the responsibility for the quality of goods is transferred onto the various subcontractors. This 'non-error strategy' implies the 'delegation' of responsibility from final producers to their subcontractors. Heavy demands are placed upon the subcontractors in this relationship not least where the smaller subcontracting firms are concerned.

ISO 9000 is the collective term applied to a number of different quality assurance systems, which have been implemented on a large scale throughout the 1990s both within Swedish and European industry. ISO is not a standard applied to products but instead focuses on the quality assurance of processes as a whole, not only production but the entire process within a firm, from management levels down to delivery systems and after sale services[10]. The system is built upon very detailed requirements and a high degree of specification with regards to the implementation of different work routines for which detailed records must be provided. Reactions to ISO 9000 at the level of the firm have varied[11]. Some larger firms feel that the routines demanded by ISO already exist, even if not to such a formal extent. Despite the increasing degree of bureaucracy associated with the ISO system, it is clear that an ISO certificate is necessary as a stamp of approval implying quality, which is of course important in terms of the market and when establishing new customer relations. Small firms, not least subcontracting firms, regard ISO (and even JIT) as an important impetus for further development, where implementation of these systems facilitates the upgrading and competitiveness of the firm. What is more many firms are of the opinion that ISO (and JIT) is imperative if they are to remain in business. For smaller firms, however, the demands placed upon them are primarily seen to be a large burden. The work load brought on by the implementation of ISO systems, is particularly great for small firms and is at times considered unnecessary. Regardless of the mixed opinions surrounding quality assurance systems, many Swedish firms since the beginning of the 1990s, have set their sights on attaining an ISO certificate. Such certificates

are often regarded as a license of sorts, particularly for subcontracting firms wishing to enter new markets abroad.

Large firms and branch organisations have actively supported the implementation of JIT and ISO to the full. By investing in quality it is hoped that they will be able to compete with the price competitive NIC nations, but also try and catch up with Japanese firms which are ahead in many market areas in terms of development. A pronounced commitment to quality and less emphasis on price competitiveness are central elements in 'post-fordist' mode of production[12], which have developed within leading industrial sectors since the 1980s. It is within this wider perspective that systems such as JIT and ISO must be appreciated and subsequently analysed.

From a subcontractor's point of view

How do the developmental characteristics and strategies behind production networks affect subcontracting firms, i.e. those firms which account for the largest portion of work and value added, especially where more complex production systems are concerned? According to the case studies we have carried out the following relationship can be identified. The commitment to improving quality means that subcontracting firms need to develop more advanced forms of collaboration, especially with their customer firms. The aim of subcontractors is to transform their role in the production network from that of 'parts manufacturer' to 'co-manufacturer' or to enter into a 'partnership' with the customer firm. 'Partnership' implies not only assuring punctual delivery and high quality, but often assuming part responsibility for construction work and product and process development. Many subcontractors look favourably upon an extended role in the production system to the extent that it is deemed vital for their survival on the market.

Playing a more decisive role in the larger production process places heavy demands on managerial capacity and on the skills of traditional industrial workers. In small subcontracting firms the managerial team usually consists of one up to a small number of people who rarely have what it takes in the way of managerial skills to cope with the necessary measures. To improve the situation often requires investments in external resources

and the recruitment of more highly qualified employees. As a result the concept of the small, often family run business is threatened. Closer links to the customer firm also normally entail investments in new technology and process technology as well as investments in information systems which link together all actors in the production system. Employees, not least those working at the floor level, are expected to upgrade their skills to facilitate the application of the new technology involved. Consequently further training is required or alternatively new employees with more advanced skills must be recruited. This can prove to be a very slow process of adaptation, often related to the generation gap between employees, that is to say older workers who often have more difficulty in learning new skills especially as far as computer technology is concerned. It is also a question, however, of the difficulties smaller firms have in competing with the larger, more prestigious firms in the bid for qualified personnel. Another constraint linked to the increased demand for broader competence is the inability of regional education establishments to produce the numbers necessary to meet market demand.

The attainment of new technology requires substantial financial investments. Limited access to capital often means that small firms face difficulties in this respect. If finances can be sorted out borrowing capital usually leads to demands for increased returns to capital, which is usually accomplished by increasing yearly turnover. In order to increase turnover subcontractors are required above all to forge links with a greater number of customer firms, which as has already been pointed out is favourable in terms of the production system as a whole. For Swedish subcontractors in the automobile industry, the machinery industry and the furniture industry (all of which are well represented in our case studies) increasing the customer base requires building up a greater number of customer firms abroad. Within certain branches a large majority of subcontractors have traditionally focused, to a greater or lesser extent, on the Swedish market. The dominant strategy pursued by the subcontractors in the case studies involved is to weaken the dominant position of customer firms such as Ikea, Volvo and Saab. If confined to the national market, the search for firms necessary to expand the customer base is, however, problematic. The alternative is to take the first step towards internationalisation by establishing basic export channels, although this entails first overcoming a number of obstacles. Such a step, for example, requires financial backing, knowledge

of the export market, marketing skills (this is an entirely new element for many), and in relation to the new market, linguistic skills. Germany is the obvious market, outside Scandinavia, for subcontractors in the engineering industry, yet the lack of linguistic skills poses a problem.

In combination these aspects give rise to demands for new forms of organisation, and enhanced levels of technology and skills. Subcontractors also need to experience growth both in physical and in financial terms, and above all they should focus their efforts on entering international markets. The circumstances vary from one subcontracting firm to the next, but those subcontractors which have particular difficulty in adapting to the new conditions are the smaller, family owned/run businesses. It should also be noted that a number of the large customer firms, e.g. Volvo, have expressed some doubt as to whether the smaller subcontracting firms are capable of meeting the new demands. These misgivings have, in some cases, lead to the termination or non-renewal of supplier contracts, examples of which have been found in the case studies.

Spatial implications

What are the explicit spatial implications of these strategies? Parts of the literature dealing with this area emphasise the geographical proximity between subcontractors and end producers which is fostered by JIT systems. The definition 'geographical proximity' is, however, dependent upon specific circumstances. Gertler's (1995) definition of geographical proximity with regard to the Canadian machinery industry, for example, concerns the links between subcontractors and customer firms within production and innovation networks located throughout the entire North American and Canadian market. Under other circumstances the term can be significantly more exacting, for example, a city or a small scale region. Despite the uncertainty surrounding the precise implications of 'geographic proximity', it can be maintained that JIT systems tend to *counteract the process of globalisation*. The physical distance separating subcontractors from their customer firms and vice versa, is not of course the sole decisive element in terms of the efficiency of JIT delivery systems. It is rather the *assurance* that the correct quantity and quality of goods will be delivered to the end manu-

facturer at a certain point in time. In this way subcontractors can meet specific delivery demands despite being located at a distance from the customer firm. Of course the reliability of the system decreases the larger the distance between supplier and customer, assuming that all other elements remain constant. The availability of nearby subcontractors is naturally an advantage for customer firms. There are certain conditions, however, which work to restrict the degree of spatial concentration, implying that 'marshallian islands', made up of highly concentrated production systems, are not so common as might appear in the literature.

In Japan production systems display a high degree of spatial concentration. This does not, however, reflect the influence of JIT systems, but is a consequence of other conditions specific to Japan, which are deeply rooted in history. Japanese firms, for example, have very advanced relations with their subcontractors. What is more, the most significant subcontracting firms only usually maintain one major customer. Over time, this meant that spatial concentration occurred naturally as a response to the conditions of the customer - supplier relationship. Toyota City[13], often referred to in the literature, is a unique case even for Japan and should not, therefore, be applied in other countries as a representative model for production systems. All twelve (!) of Toyota's assembly plants are located in this region, while the majority of the subcontractors are found within a 30 kilometre radius. In contrast, Toyota's assembly plant in Great Britain is part of a production network which spans the entire European market[14].

In relation to the application of JIT systems in western Europe and the United States the following conditions can be observed. These conditions refute the trend towards the spatial concentration of production systems[15]:

- JIT systems are gradually being implemented in existing subcontracting networks. The location of subcontracting firms is, therefore, already determined and a number of factors suggest that relocation is unlikely.

- The spatial distribution of existing production systems in western Europe is not so expansive as to prevent existing subcontractors from applying the principle of JIT.

- Many manufacturers of final products are not sufficiently large to support one single subcontractor. Subcontracting firms must, therefore, build up contacts with several customer firms, thereby adapting to a number of production systems, which are often part of different branches. The location patterns of subcontracting firms are not, therefore, quite so apparent.

More recent studies of Swedish production systems[16] confirm the arguments above. Even if an increase in spatial concentration is apparent, the impact JIT systems have on the location of subcontractors is limited at best. Subcontracting firms do not go out of business as a result of their geographical location, and they seldom relocate in order to meet the demands of JIT systems. There are many examples which can be identified in the automobile and machinery industry included in the case studies where we can see how subcontractors are involved in advanced JIT systems where the demands for delivery and quality are high. In a number of cases these firms are located at a disadvantage in the national transport network. They are part of production networks where the final manufacturers are based in both the Gothenburg and Stockholm region as well as in Germany, Belgium, France and Great Britain. The physical distance between subcontractors and their customer firms has not resulted in the termination of contracts with firms in these countries. Sweden's geographical position in relation to the European market does, however, imply some disadvantages. When all other elements are determined, the aim of the customer firm is nevertheless to shorten the physical distance between the various points in the production network, although for practical reasons this can prove to be a difficult task. If Renault, for example, has access to a subcontractor of equal merit in France, the chances are that this subcontractor will have a competitive advantage over subcontractors located in Sweden.

Another element indicating an increase in spatial concentration, apart from those already mentioned, i.e. reliability and punctual delivery, is the growing number of foreign component manufacturers in Sweden. These firms have no prior ties to Sweden, which provides them with a great degree of flexibility regarding choice of location. Japanese subcontractors, when entering the North American market for the first time, chose to locate in the vicinity of Japanese owned final assembly plants. The same pattern is currently being observed in Europe, whereby firms choose loca-

tions nearby assembly plants. As part of a strategy to draw in subcontractors physically in order to improve quality and facilitate the principles of JIT systems, Volvo set up a 'supplier park' in Arendal in Gothenburg. Eight new subcontracting firms from three different countries have set up business in the park so far[17].

The globalisation of production systems is, in other words, slowing down if indeed not diminishing as a result of JIT systems. It is, however, rather more uncertain whether we will see an increase in 'regionalisation' or local/regional ties (especially if by region we mean something similar in size to a local labour market region). Some examples of this phenomena do exist but at present a broad empirical basis is lacking.

The pursuit for quality and its geographical representation

The drive for quality, reflected for example by ISO systems, enhances the need for functional proximity, as demonstrated earlier. Partnerships forged between customer and subcontractor are beginning to emerge as a key element of production systems. It is not entirely clear, however, what spatial form this functional integration will take. As far as Sweden is concerned the most advanced customer - subcontractor relationships are usually between Swedish firms and firms abroad[18]. This is largely due to the fact that the capacity required is not available locally, which is a consequence of the high degree of specialisation and division of labour within production systems. In a small nation like Sweden, moreover, there are only a limited number of firms on offer which consequently narrows down the number of possible 'partners' in the production system. It is interesting to note, however, that it is still fully possible to establish and cultivate relationships between subcontractors and customer firms, despite the large distances which may separate them.

At the same time more advanced forms of collaboration based upon joint CAD/CAM systems have induced stronger regional ties. On the other hand other firms, in pursuit of more advanced subcontracting relations, utilise the entire Swedish market in their search. Those who maintain the existence of more local or regional systems usually base their arguments upon extremely specific cases found within a few regions throughout the

world; here the exception becomes the rule. If, however, we were to begin by analysing the 'vast, grey mass' of industrial firms and regions the situation would be far more complicated. Since the beginning of the 1990s the appearance and significance of 'learning economies', 'learning regions', 'untraded interdependencies', local networks and 'local embeddedness' etc. has formed the core of a debate within economic geography[19]. A new discourse, related to the aforementioned debate, has emerged linking culture and the economy. Some maintain that competitive regions are often characterised by a particular *regional culture*. There are many examples of such regions[20]. Others emphasise the national institutional framework which they believe is fundamental in cultivating a particular regional culture[21].

According to the firms included in our case studies which are based in the South of Sweden, the national arena is deemed to be most influential. Small thickets of 'regional culture' do exist of course, primarily linked to traditional labour skills and an industrial culture which has evolved over the years, but these are insignificant elements compared to national characteristics. The opinion of Swedish firms is that politics and those involved are vital in ensuring the competitiveness of Swedish industry[22]. It is not to say, however, that significant regional cultures do not exist. However, it is hardly surprising that these regions do not really stand out in a relatively small and homogeneous nation such as Sweden. Accordingly regional cultures appear more pronounced in a country consisting of stronger regional identities.

The greatest degree of spatial concentration is probably required by innovation networks and to a lesser extent by production networks. At the same time, however, it is important to bear in mind the spatial implications of strategies which focus on enhancing quality. Will the partnerships discussed before place greater requirements on the need for geographical proximity? The answer to this question is probably yes. Yet at the same time this is only true of the minority of networks consisting of firms which are of a more knowledge or research intensive nature. The benefits associated with geographical proximity[23] have to be considered in relation to other expenditures as well as the availability of local resources.

Europeanisation?

What can be said about the situation in Europe? To begin with a brief summary of the developments within the European automobile industry will be presented. The automobile industry has traditionally been a domestic concern in terms of both consumer demand and as a site for the location of production systems. The major automobile firms are of significant importance for the national economy, especially due to the expansive production networks which characterise the industry. The state consequently looks favourably upon and actively supports these dominant firms. In the United States it was maintained at one point that if GM sneezed then the entire economy would catch a cold. To a certain extent this kind of relationship is still apparent in Europe.

The competitiveness of the automobile industry is highly dependent upon the socio-political environment particular to individual nation states[24]. European car manufacturers still tend primarily to use domestic subcontractors despite moving towards 'global sourcing'. According to Lagendijk (1997) it will be a long time before production networks are fully established throughout Europe. In France and Italy ties between the automobile industry and the state are particularly strong. The strictest degree of protectionism directed at foreign competitors is also found within these countries.

There are some signs, however, that the national emphasis is being eroded. A study covering some of Europe's largest component manufacturers demonstrates that national sales[25] decreased significantly during the first half of the 1990s. The large majority of sales are not, however, absorbed by other European markets but those outside Europe. According to the results of the aforementioned study, in 1994 national sales accounted on average for 32% of total sales while the equivalent figures for Europe and the rest of the world were 36% and 32% respectively. As far as these firms are concerned at least, there is nothing to indicate a move towards the 'europeanisation' of operations. The establishment of Japanese and American automobile manufacturers in the European market has also contributed in weakening the national composition of the European automobile industry[26]. For example, despite the fact that Toyota's assembly plant is located in Great Britain, the production network spans the entire Euro-

pean market. Similarly Ford's production networks are European wide with assembly plants located in several European countries.

The development of the European automobile industry receives assistance from the EU through its industrial and technology policies, although this support is directed solely at large manufacturers of final goods and not at production systems as a whole. These dominant manufacturers also represent a powerful lobby at the Union level. The EU, however, by stipulating 'local content' requirements has nevertheless promoted the transformation and europeanisation of production networks. 'Local content' implies that if a product is to be considered of European origin, a certain proportion of the components used must be provided by European manufacturers (regardless of ownership). Non-European automobile manufacturers, in particular American and Japanese and to a certain extent South Korean firms, are forced as a result to purchase supplies in Europe rather than from their respective national suppliers (the same local content requirements also exist in the Unites States). It follows therefore that 'domestic' industry in Europe will more than likely be characterised by a process of europeanisation rather than a process of globalisation. At present the local content requirement placed on Japanese automobile manufacturers lies at 80%[27]. In response these firms have established their own supplier base in Europe (and even in the USA), a development which primarily the French authorities and French industry have refused to accept, arguing that "Japanese products are still Japanese even when produced in Europe". A Japanese car manufactured by Nissan in Great Britain will still be regarded as a Japanese car despite adhering to local content requirements set at a minimum of 80%. These cars consequently fall under the quota system which presently regulates the number of imports from Japan.

The Swedish automobile industry has shown clear signs of europeanisation. The domestic market has without doubt been of decisive importance for these firms, only a few of which have any foreign customers at all. A clear reorientation has, however, taken place during the 1990s whereby West Europe has emerged as the focal market. As was demonstrated earlier, Swedish supplier firms are being forced to seek customers in foreign markets as a result of the quality enhancing strategies pursued by many knowledge and research intensive firms. The West European market is in this respect the most obvious alternative. This reorientation is not, however, limited purely to exports but includes the establishment of pro-

duction units in e.g. Germany and Belgium (greater detail will be provided later in the section on market strategies).

Changes within the production networks of the automobile industry can also be observed by looking at the purchases made by customer firms. Volvo and Saab have tended to purchase a decreasing number of components from Swedish suppliers. 35% of the components required for the Saab 9000 model are manufactured in Sweden. The equivalent figure for the 900 model is 31% while 26% for the most recent 9-3/5 model. The same pattern is true of Volvo where barely 30% of components required for the cars produced in Torslanda are supplied by Swedish firms. A few years ago Germany was the largest supplier to the Swedish automobile industry accounting for one third of purchases[28]. At this point in time 86% of components in total originated from the European market. In other words Volvo's production network is without doubt European in reach, even when considering the significance of Japanese suppliers (8% 1991) and the rather less overt presence of American suppliers in the European market.

Market orientation and penetration - Sweden, Europe and the world

As far as production networks are concerned, strategies behind production and marketing are becoming increasingly interwoven. This becomes particularly clear when focusing on the subcontractors in these systems. It can be said that the customer firms within production systems comprise the subcontractors' market. By simultaneously taking account of market conditions it is thus possible to improve our understanding of the organisation and location of production. This particular element as well as the link between market and production will be discussed in the following section.

'Host market production' and 'Product specialisation for a global market'

Like production networks market strategies are complex and lack a single, satisfactory explanatory model. A general incongruity exists between the 'local' and the global, between country specific strategies, strategies relating to larger regions comprised of several countries (often referred to as macro-regions) and more global strategies. Transnational corporations (TNCs) do not pursue a single joint strategy, but instead often pursue a combination of highly differentiated tactics regarding market orientation and market penetration. The situation can arise where large, 'global' firms can apply different strategies in relation to the different products manufactured. The spatial division of labour between the different units which comprise transnational firms is influenced by organisational/technological factors internal to the TNC and the regional production environment[29] (regions, nations, regional blocks) where the firm's operations are located. Again we see how the competitiveness of firms is dependent on a firm's internal resources as well as factors in the external environment.

Swedish TNCs display a high degree of internationalisation or globalisation, something which is not very surprising considering the fact that Sweden is a very small and open economy. A number of corporations are in a position where over 50% of their activities are situated abroad both in terms of the number of employees abroad and as far as sales abroad versus exports from Sweden (see table 1). SKF, AGA and Electrolux are extreme cases in this respect. But as is apparent from the table, large differences do exist. At the same time, a giant in the telecommunications sector like Ericsson has a much stronger foothold in Sweden, even though the global character of the firm is still growing. Saab, the second largest Swedish automobile manufacturer, probably deserves the label multinational rather than transnational. It has only a small proportion of its activities abroad and most of its integrated operations within Sweden. It is impossible to provide an unequivocal account of the market strategies that these figures hide. Two alternative models to direct export from domestic markets, however, are 'host market production' and 'product specialisation for global markets'. These models are seldom found in such absolute terms not even when studying individual TNCs[30], yet they are nevertheless important tools of analysis[31]. IBM, for example, is referred to as "the Corporate Chameleon"

indicating the way in which the firm adapts to the different national and cultural environments it operates in[32]. ABB talks about the ”art of being local world-wide” or being a ‘multi-domestic’ firm[33].

Host production concerns the location of production units in the market for which the goods are intended. There are several reasons which can explain such a structure. Transport costs might be high for example, technical regulations can require extensive adaptation to national market conditions, some host governments may encourage host market production by erecting trade barriers and stipulating ‘local content’ requirements, and lastly it is important for production units to be able to respond quickly to local market conditions.

Table 1. Some of the largest Swedish manufacturing firms and their sales from units abroad related to total sales abroad (including exports).

TNC	Sector	%
SKF	Ball-bearing	98
AGA	Gas energy	97
Electrolux	Household equipment	97
Atlas Copco	Mining equipment	86
Volvo	Automobiles	66
Sandvik	Steel, Special steels, tools	60
Astra	Pharmaceuticals	56
Stora	Pulp, paper	55
Ericsson	Telecommunications	44
Saab	Automobiles	13

Data from 1994.
Source: based on data in SNA, Sverige i världen (1996) and Erlandsson (1997)

Ideally *product specialisation for a global market* implies that a firm like SKF, for example, will manufacture a particular type of ball bearing in Germany, another in Japan and a third variant in Sweden. From these countries production units then serve the entire world market. In reality many ‘global’ firms combine both forms of organisation. In this respect it would be interesting to see whether there is a tendency towards one alternative as opposed to the other, and if so what this could imply for production units in

Sweden. One hypothesis is that the EU will bring about an increase in the application of product specialisation as an organisational principle, which is seen as a logical consequence of the diminishing significance of national borders. On the other hand the EU can be regarded as a 'nation' of sorts in global terms, with internal integration on the one hand and external protectionism on the other. It would follow, therefore, that if a Swedish firm were to establish production units somewhere within the Union, then it could in principle be deemed 'host market production'. The boundaries differentiating the two principles are somewhat ambiguous seen from such a perspective.

Market strategies - some concluding remarks

Although international, and even global markets are growing in significance, domestic markets continue to be of critical importance for the firms included in our case studies. The domestic market is often highly developed with a sophisticated customer base, which is considered positive in terms of innovative capacity especially in relation to day-to-day product and process development. Firms turn to host market production when adapting to new and expanding markets outside West Europe. This is also true of production in the East European market. Before taking the step to establish production units abroad, many firms begin by partaking in joint ventures and licensing agreements in order to establish a foothold in the new market.

The increasing trend towards host market production described previously can signify a threat for a nation like Sweden which has a relatively small domestic market. Problems will arise if firms move an increasing number of operations abroad. This may weaken Sweden's industrial base especially when considering that large final producers, that is to say the central nodes in production systems, are often the instigators of this development process. If these firms move operations or invest in markets abroad then the likelihood is that subcontractors will follow. Host market production tends, therefore, to duplicate existing production systems not only affecting final producers but also other areas of the production system as a whole. The results of the case studies demonstrate how firms within the

automobile industry establish parallel production networks, one in Sweden/Scandinavia and one in the rest of Europe. We have also illustrated that these types of organisation also encompass a large number of subcontractors of sub-assembly goods.

There is a risk, in other words, that the home base of many Swedish firms in various regions will diminish in significance, as it is not only production which is moved abroad but other central functions such as product development and marketing facilities. Consequently operations similar to those usually carried out in the home base are seen to emerge in either one or more locations abroad. When applied, the principle of product specialisation can also result in similar developments. Product specialisation is particularly prominent among knowledge intensive firms within the engineering industry, which already display a high degree of internationalisation. These firms are often global in scope and are less dependent on the home base, i.e. there is a large chance that these firms will restructure operations as described above. The situation is somewhat different with regard to firms within the electronics, instruments and pharmaceutical industry. These firms have a stronger link to the Swedish home base, while they are less likely to move production units and strategic functions abroad. In a sense the firms within these branches are more loyal to the domestic market without dismissing the importance of future changes to Sweden's home base.

The role of the nation-state in a 'network economy' - some arguments

The preceding analysis of production systems points to several spheres in which the traditional role of the nation state is challenged. There are those who proclaim the demise of the nation state as a result of globalisation. I am of the opinion, however, as are the majority of economic geographers, that territory and the state will continue to hold a central role albeit a role which is modified in certain ways. The state continues to hold a number of key economic functions, functions which cannot be taken over by the

EU nor the individual regions. The first function is what Amin and Thrift call "corporate governance"[34] i.e. that the rules of the market are maintained by the state (implying of course that the market is not a self regulating mechanism). The second factor concerns the instigation of innovative creativity, which according to extensive literary sources[35], is best accomplished through national innovation networks. The state in this respect holds a central role in providing the means for training and research. The last function involves the regulation of employment and of the welfare system.

These points have been taken up and developed by Hirst and Thompson[36]. They maintain furthermore that the nation state also has a central role to play in a globalising economy. The economy is entrenched in society, thereby implying that the continued role of the state in managing society is a vital element in welfare creation. With regards to 'corporate governance' Hirst and Thompson maintain that large multinational firms are dependent upon the state as a symbolic partner. The nation state is an important component in the competitiveness of firms. As far as these firms are concerned in other words, the demise of the nation state in terms of its influence in economic spheres, is hardly a positive development and certainly not one that should be favoured. If the state is to maintain its pivotal role in the future then it must accomplish the following:

- Form a "distributive coalition"[37]. The state needs to "win the approval of the economy's central actors in order to create a durable distribution of national income and national expenses which is favourable for the competitiveness of the industry". The balance between consumption and investment is significant in this respect, as well as ensuring the necessary tax levels in order to facilitate investment in infrastructure and education etc. (see for example the contemporary political debate between the government and industry regarding the significance of wage taxes and how these taxes affect the competitiveness of industry).

- The state needs to address the development and management of a social consensus. A distributive coalition "works well when derived from a culture of political cooperation where central organised interests are accustomed to negotiating national economic

> objectives". In conjunction the state must provide the apparatus necessary to mitigate conflict.

In other words the state has an important role to play in inspiring confidence between different actors within the economy. The question is, however, whether relationships based on trust can be established through supranational institutions or within transnational territories. It is generally agreed that this would be difficult to accomplish, at least within the larger nation states. Relationships established between actors within the economy, it is thought, are most successful when restricted to smaller regions.

The state's involvement in the globalisation and the competitiveness of the economy is increasingly more active, hence the emergence of an 'entrepreneurial state'[38] where political decisions taken by the state are all the more influenced by forces emanating from outside national boundaries. These developments may be necessary, but I am of the opinion that such a stance taken by the state contra the economy has its risks and would challenge the democratic legitimacy of the state. At the local level it is feared that political power is diminishing in terms of decisions taken by actors in the local economy. The situation where nation states are subjected to the pressures of a global economy and its principal actors, transnational firms, is reinforced by current negotiations to create a standardised international/ global framework for foreign direct investment, the so called MAI agreement. At the same time this is an indication of how the governments of OECD countries are willing to embrace the economy by intensifying the degree of cooperation between these countries. Although some would claim that this is rather a sign of resignation than willing cooperation.

The most recent phase in the development of the economy is what Dunning terms *alliance capitalism*. In part this term describes the alliance and cooperation between firms brought up earlier in this discussion. In addition Dunning describes *alliance capitalism* as "a recognition of the need of governments and firms to work together if the economic goals of society for which the former is ultimately responsible are best to be achieved"[39]. According to Dunning states or blocks of states are becoming all the more competitive, a consequence of the enhanced mobility of resources over space.

Strategic alliances[40] are an important component of alliance capitalism. These are highly advanced yet at the same time well defined forms of

cooperation between competitors. This form of partial fusion, sometimes established in a specific company, and sometimes only in the form of specific agreements, can be seen as a means to increase flexibility. Alliances between competitors are becoming all the more common and are to be found within a large number of branches. Product development, production co-operation (e.g. the Nedcar project in Holland involving Volvo, Mitsubishi and the Dutch government), process technology, marketing and distribution are some of the areas in which alliances can be formed. As far as the nation state and political life are concerned, these alliances represent a threat. Structural organisations are established which act to reinforce a situation where development takes place 'behind closed doors'. Politicians at the national, regional and local level are consequently finding it all the more difficult to comprehend, let alone influence matters.

From nation state to region state?

Assuming that we accept the parallel existence of globalisation and regionalisation, it is possible that a more pronounced political presence at the regional level would increase the power of the regions, while at the same time diminish the power of nation states in political, economic spheres. This may even culminate in the dissolution of some nation states. What then would the alternative scenario be? In my opinion we would see the emergence of dynamic regions which would resemble nation states but on a smaller scale[41]. That is to say, if these new regions, which combined make up a 'Europe of the regions', do not develop institutions similar to those identified with present day nation states, it is unlikely that they will be able to appropriate any significant authority in relation to the economy or the EU. Alternatively 'region-states' would form which, in the foreseeable future, would need to consolidate a territorially defined sphere of influence. While national boundaries are being erased, new boundaries are appearing in their place. Would this represent the most extreme realisation of a 'renaissance of the region'[42]? Could such a development have any significant implications for an economic system which is global or European in reach?

The state and TNCs as 'stateless/placeless'- some concluding remarks

Manuel Castells[43] launched an idea stemming from developments within advanced nation states, which he maintained warranted a shift in focus from "from a space of locations to a space of flows". These means, among other things, that production and power are, to an increasing extent, to be found within processes and flows as opposed to being associated with place. The extreme case scenario would therefore imply releasing production from geographical limitations, that is to say production is 'de-nationalised' and the territorial state loses its power to a greater or lesser extent[44]. When referring to the logic of places and the logic of flows, Castells talks of "a structural schizophrenia". He maintains furthermore that,

> "the dominant tendency is toward a horizon of networked, ahistorical space of flows, aiming at imposing its logic over scattered, segmented places, increasingly unrelated to each other, less and less able to share cultural codes"[45]

The argument is striking while at the same time implying the risk that the role of space, territory and place becomes marginalised. The fact that more attention should be paid to processes and flows and the fact that space is not continuous in nature is granted, something which is apparent particularly in studies of production and innovation networks. Yet at the same time this viewpoint implies that the nodes within the networks become less significant, and that the central aspect is rather what occurs within the links of the networks, as if talking of place on the one hand and flows/networks on the other, that is to say either or. It is no coincidence, however, that the nodes are to be found precisely where they are within the networks. The nodes are 'transmitters' of sorts and possess place-bound characteristics which means that they have specific roles to play within the networks. The location of the nodes is by no means random. Rather what we have is a dialectal relationship between space and firms/networks/flows. The nodes and networks are just as much a construction of the space that they in turn influence. The variation in the compilation of nodes within production and

innovation networks is, therefore, not nearly as extensive as is often maintained in the 'flexibility discourse'.

By this means, political actors from different types of territory continue to play an important role even when the conditions under which they act may have changed. Place-bound characteristics such as labour force, competence and physical infrastructure are highly influenced by political decisions taken within a specific territory. Is it really credible to maintain the growing power of regions while at the same time projecting the notion of the stateless/placeless firm? If national borders are to seem illogical in terms of transboundary firms, why then should regional borders appear more logical?

The mythological TNC as a stateless/placeless firm operating within a borderless environment has achieved acclaim both in academic and political circles. But how 'transnational' are firms in reality? To what extent are they stateless or placeless? Certainly there are firms with ambiguous identities and with extensive operations which span the globe. Dicken[46] by examining the one hundred largest TNCs within the world in terms of what he defines 'transnationality', is critical, however, of the notion of the TNC proceeding independently of states and political territory. Table 2 illustrates the fact that only 42 of the 100 largest firms have more than half of their assets and activities outside the country of origin. The majority, in other words, are strongly linked to a 'home country'. Firms have a 'home base' even if they operate a global strategy, with operations spread throughout a large number of countries. Dunning also illustrates how the characteristics linked to the country of origin can influence a firm's 'owner-specific advantages' in relation to the process of internationalisation[47].

With reference to case studies mentioned earlier[48] a number of TNCs are included, primarily within the engineering industry, which have a large percentage of sales and activities situated abroad. Nevertheless these firms consider themselves to have strong links to Sweden, at times even to a specific area or region. The factor influencing these firms and the way they define what they consider to be their home base is usually the competence possessed by the local labour force, something which is often the result of a long historical process leading to the creation of a particular knowledge culture tied to a specific place. This knowledge is not easily transferred to or created in other locations. We find no reason to believe that these firms are in the process of abandoning Sweden as their home base. Some of the

firms, on the other hand, indicate a development whereby a similar home base organisation is established in another country as part of a specialisation or market orientated strategy of product development. Consequently the home base is weakened but does not disappear completely.

Table 2. The degree of "transnationality" amongst the top 100 TNCs, year 1994. Some examples.

TNC in order of "transnationality"	"Home country" / country of origin	Industry	Trans-nationality index
1 Thompson Corp.	Canada	Publishing / printing	92
4 Sandoz	Switzerland	Pharmaceuticals	89
5 ABB	Switzerland	Electrical equipment	88
7 Electrolux	Sweden	Household capital goods	87
14 Bayer	Germany	Chemicals	73
21 Volvo	Sweden	Automobiles	67
33 Sony	Japan	Computers	56
42 Procter / Gamble	USA	Soaps / cosmetics	50
50 Bosch	Germany	Auto parts	47
65 Hewlett Packard	USA	Computers	41
80 Ford	USA	Automobiles	29
82 Toyota	Japan	Automobiles	28
85 General Motors	USA	Automobiles	26
91 ITT	USA	Diversified activities	21
97 Kobe Steel	Japan	Metals	17
100 AT & T	USA	Electronics	11

Transnationality index: represents the average of foreign assets, sales and employment to total assets, sales and employment.
Source: Based on Dicken 1998

In a study of Swedish firms, focusing on the likelihood that these firms would move the head office function abroad, an appreciation of the firms' dependency on the home base becomes apparent[49]. In this study it is maintained that local and national conditions are significant as far as headquarter

functions are concerned, but when considering the relocation of the head office, or particular functions related to the head office, it is the global expansion strategy pursued by the firm that is of utmost importance. Thus markets and market penetration determine the development of the firm's organisation and the location patterns which ensue, and consequently where the managerial functions will be placed.

With a few exceptions, therefore, TNCs have an identifiable home base. Operations which are carried out outside this home base are far from independent of the characteristics particular to other territories. TNCs are influenced by these 'foreign' environments, while at the same time retaining important characteristics specific to their home base. In this way the TNC also influences the host country in a variety of aspects. The links to the host nation are often complex as well as being characterised by intricate negotiations between the host nation and the TNC.

To conclude we can look upon globalisation, europeanisation and local embeddedness as phenomenon which are closely inter-linked and as concepts belonging to a common context. The role of the nation state or any kind of territory, will in this perspective continue to be questioned. Taken, however, from the side of production and innovation networks and the TNCs involved in these, although the nation state and its institutions are challenged, some kind of state or political institutional framework is still required and moreover requested by small and large enterprises. Finally, place matters, despite the fact that the relationship between TNCs and space in their bid to improve their competitiveness is changing all the time, and despite the development of the so called 'network economy', which stresses other qualities and forms new interdependencies than those observed in the traditional industrial society.

Notes

[1] Hirst, Thompson 1995 & 1996, Holmén 1996, Daniels, Lever 1996, Amin, Thrift 1997, Dicken, Peck, Tickell 1997

[2] Dicken 1998

[3] See Hirst, Thompson 1995, for a discussion which focuses on the global economy. See also Dicken, Peck and Tickell 1997, for a critical analysis of Hirst and Thompson who are considered ”hyper-critics”. The fact that Hirst and Thompson deny the existence of global processes i.e. something that few if any researchers would do, complicates the discussion of globalisation as a process.

[4] See Lundquist 1996 as well as footnote 6

[5] For a brief summary of the term agglomeration and cluster see Jonsson 1998

[6] See e.g. Asheim 1996, 1997, Maskell, Malmberg 1995, Storper 1995

[7] Carried out in collaboration with Lars-Olof Olander and reported in e.g. Jonsson, Olander 1995, Jonsson, Lundquist, Olander 1996, Jonsson 1998

[8] See reference 7

[9] Alvstam, Larsson 1998

[10] For a summary see Kritzberg, Martell 1994

[11] Jonsson 1998, Jonsson, Lundquist, Olander 1996

[12] For a summary see Jonsson 1991, Amin 1994

[13] Takeuchi 1990, Larsson 1993

[14] Wells, Rawlinson 1992

[15] Morris 1988

[16] Jonsson 1989, Larsson 1993, Jonsson, Lundquist, Olander 1996

[17] Volvo. Annual report 1997, Alvstam, Larsson 1998

[18] Jonsson, Olander 1995

[19] See, for instance, Storper 1997

[20] See Footnote 6 as well as Storper 1992, Peet 1997

[21] Gertler 1997

[22] Jonsson, Olander 1995, Jonsson, Lundquist, Olander 1996

[23] The incorporation of a cultural aspect in the term geographical proximity provides a beneficial insight. See e.g. Gertler 1997 and Peet 1997

[24] Lagendijk 1997

[25] These firms often have separate production units in several different countries both within and outside Europe. Bosch's home base is in Germany yet important units are also located in France, Great Britain, Spain, USA, Mexico, Brazil and India (see Sadler 1994)

[26] Wells, Rawlinson 1992

[27] Dicken 1998

[28] Larsson 1993

[29] Dunning (1993) refers to these characteristics in terms of "location specific advantages" important for firms when establishing production abroad.

[30] de Smidt, Weaver 1990, Dicken 1998.

[31] For a summary of the different theories explaining why firms establish operations abroad see Dunning 1993

[32] Kelly, Keeble 1990.

[33] Dicken, 1998, Alvstam, Erlandsson 1996.

[34] Amin, Thrift 1997

[35] See e.g. Lundvall 1992

[36] Hirst, Thompson 1995 &1996

[37] Hirst, Thompson 1995 p.49

[38] Amin, Thrift 1997, Dunning 1997 a,b

[39] Dunning 1997 a

[40] Dicken 1998

[41] See Tägil 1992 for a discussion and a definition of the state, nation and the region

[42] Törnquist 1998

[43] Castelss 1996

[44] Törnqvist 1996, Ohmae 1990

[45] CastellsCastells 1996 p.428

[46] Dicken 1998

[47] Dunning 1993

[48] Jonsson, Lundquist, Olander 1996

[49] See Länsstyrelsen i Stockholms län 1998

References

Alvstam, C., Larrson, A. (1998) Power an proximity of small and medium-sized enterprises in JIT supply networks. The case of Volvo Arendal supplier-park. Gothenburg, Sweden. Paper presented at the Residential conference within the IGU Commission on the Organisation of Industrial Space, Seville, Spain, August 24-28, 1998.

Amin, A. (1994) Post-Fordism. A reader. Oxford.

Amin, A., Thrift, N. (1997) Globalisation, Socio-economics, Territoriality. In Lee and Wills (ed) Geographies of Economics. Arnold.

Asheim, B.T. (1996) Industrial Districts as 'learning regions': a condition for prosperity. European Planning Studies, vol. 4 no. 4 1996.

Asheim, B.T. (1997) Location, Agglomeration and Innovation; towards Regional Innovation Systems in Norway? European Planning Studies, vol. 5, no. 3 1997.

Castells, M. (1996) The Information Age: Economy, Society and Culture. Vol 1: The Rise of the Network Society. Blackwell.

Daniels, P., Lever, W. (1996) The Global Economy in Transition. Longman.

Dicken, Peck, Tickell (1997) Unpacking the Global. In Lee and Wills (ed) The Geography of Economics. Arnold.

Dicken, P. (1998) Global Shift. Transforming the World Economy. Paul Chapman.

Dunning, J. (1993) Multinational enterprises and the global economy. Addison Wesley.

Dunning, J. (1997a) Technology and the boundaries of firms and governments: some notes. Paper presented at the International Seminar on the changing nature of the firm in Stockholm Feb. 1997. Swedish Ministry of Industry and Trade and OECD.

Dunning, J. (1997b) Reconfiguring the boundaries of international business activity. (See reference above)

Erlandsson, U. (1997) Internationaliseringen av svenskt näringsliv. Institution för kulturgeografi och ekonomisk geografi. Lunds Universitet.

Gertler, M. (1995) 'Being there': Proximity, Organisation, and Culture in Development and Adoption of Advanced Manufacturing Technologies. Economic Geography, vol.71, 1995.

Gertler, M. (1997) The Invention of regional culture. In Lee and Wills (ed) The Geographies of Economics. Arnold.

Hirst, P., Thompson, G. (1995) Globalisering - en myt? Internationell ekonomi och statlig styrning. Häften för kritiska studier no. 2 1995, including no.2 1996.

Hirst, P., Thompson, G. (1996) Globalisation in question: the international economy and the possibilities of governance. Cambridge: Polity.

Holmén, H. (1996) Ett ord på vägen - 'globalisering' ifrågasatt. Nordisk Samhällsgeografisk Tidskrift, no. 23 1996.

Jonsson, O. (1989) Från Fordism till Flexibel Specialisering. Mot en ny produktionsordning. Mot ett nytt rum? Rapporter och notiser, no.93. Institutionen för kulturgeografi och ekonomisk geografi, Lunds universitet.

Jonsson, O. (1991) Neo. Post. Flex. Informationsteknologin och ett nytt produktionparadigm. In Regioner och nätverk. Ds 1991:37. Industridepartementet.

Jonsson, O. (1992a) Det vårdindustriella klustret. Exempel på forsknings- och kunskapsintensiva klusters betydelse för Malmö/Lund-regionens konkurrenskraft. In Mathiessen, C.W:, Wärneryd, O. (red): Öresundsförbindelsen. Integration Köpenhamn-Malmö-Lund. Potentialer-barriärer- problem. Köpenhamns och Lunds universitet.

Jonsson, O., Olander, L-O. (1995) Malmöregionen - hemmabas för internationell konkurrenskraft? Samspelet mellan företagens och regionens resurser. Rapporter och notiser no. 141, Institutionen för kulturgeografi och ekonomisk geografi.

Jonsson, O., Malmberg, A., Olander, L-O. (1996) Geografisk närhet och konkurrenskraft. Om industrins beroende av den lokala och regionala produktionsmiljön. Rapport från Närings- och handelsdepartementets enhet för struktur- och ägarfrågor. No. 2 1996.

Jonsson, O., Lundquist, KJ. Olander, L-O. (1996) Regionen och den internationella konkurrenskraften. NUTEK. R 1996:86.

Jonsson, O. (1997) Kluster som analysinstrument i närings-, regional- och arbetsmarknadspolitik. Arbetspapper no. 7/97. NUTEK.

Jonsson, O. (1998) The geography of collaboration - SMEs and new competitive strategies. The Swedish case. Paper presented at the IGU conference 'Small and medium sized enterprise in a changing world', Seville, Spain, August 24-28, 1998.

Kritsberg, K., Martell, N. (1994) Flexibility and the need for quality assurance. School of Economics and Management, Lund University.

Lagendijk, A. (1997) Towards an integrated automative industry in Europe. A 'merging filiére' perspective. European Urban and Regional Studies, no 1 1997.

Larsson, A. (1993) Underleverantörssytem i förändring. Geografiska aspekter på'just-in-time'-tillverkning. Chorus 1993:4. Kulturgeografiska institutionen, Göteborgs Universitet.

Lundquist, KJ. (1996) Företag, regioner och internationell konkurrens. Om regionala resursers betydelse. Meddelanden från Lunds Universitets Geografiska Institutioner, avhandlingar nr 129. Lund University Press.

Lundquist, KJ., Olander, L-O. (1998) Regional economics; a threat to the nation state? CFE Working Paper Series No. 2.

Lundvall, B-A. (ed) (1992) National Systems of Innovation. London. Pinter.

Länsstyrelsen i Stockholms län (1998) De nya utvandrana? Kommer de stora företagen att flytta huvudkontoren till utlandet? Rapport 1998:3

Maskell, P., Malmberg, A. (1995) Localised learning and industrial competitiveness. Working Paper 80. Berkley round-table on the international economy. (BRIE).

Morris, J.L. (1988) Nre Technologies, flexible work practices, and regional socio-spatial differentiation. Environment and Planning D: Society and Space, vol 6

Ohmae, K. (1990) The Borderless world: power and strategy in the interlinked economy. Fontana.

Palmer, R. (1995) Globaliseringsbegreppets objektiva grund och teoretiska funktion. Häften för kritiska studier nr 3 1995

Peet, R. (1997) The Cultural Production of Economic Forms. In Lee and Wills (ed) The Geographies of Economies. Arnold.

Rawlinson, M., Wells, P. (1993) Japanese Globalisation and the European Automobile Industry. Tiijdschrift voor Econ. en Soc. Geografie, 84, 1993, no.5.

Sadler, D. (1994) The Geographies of Just-in-time: Japanese Investment and the Atomative Components Industry in Western Europe. Economic Geography, vol 70, no 1, 1994.

Sadler, D. (1997) The Role of Supply Chain Management Strategies in the 'Europeanisation' of the Automobile Production System. In Lee and Wills (ed) The Geographies of Economies. Arnold.

Storper, M. (1992) The Limits to Globalisation: Technology districts and international trade. Economic Geography, vol 68, no 1.

Storper, M. (1995) The resurgence of regional economies, ten years later; the region as a nexus of untraded interdependencies. European Urban and regional Studies, 2.

Sveriges Nationalatlas (1997) Sverige i världen. LMV. SSAG. SCB.

Takehuchi, A. (1990) Nissan Motor Company. In de Smidt and Weaver (ed) The Corporate Firm in a Changing World Economy. Routledge.

Tagil, S ed. (1992) Europa - historiens återkomst. Gidlunds

Törnqvist, G. (1996) Sverige i nätverkens Europa. Gränsöverskridandets former och villkor. Liber-Hermods

Törnqvist, G. (1998) Renässans för regioner. SNS Förlag.

Wells, P., Rawlinson, M. (1992) New procurement regimes and the spatial distribution of suppliers: the case of Ford in Europe. Area 24.