# Regional Economic Policy in Europe in the 1990s

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# Regional Economic Policy in Europe in the 1990's in the light of the experience of the 1980's

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**Summary**

During the post war boom, regional policy in Europe was primarily concerned with encouraging the spatial redistribution of jobs. It did this through encouraging a relocation of manufacturing and (in some countries) office based industries through grants and incentives. Most countries also used large scale infrastructure projects to support such programmes of productive relocation. It is this set of policies which is now in question.

Partly this is because - as a policy - it is not working. Regional inequality in the EEC, having narrowed in the 1960s, widened in the 1970s and 1980s. In recent years there has been less footloose industry to relocate. That which there is has used the power of relocation to set one region against another, engaging them in a competitive bidding up of incentives in order to secure the investment. It is a pattern common in the United States, and leads less to a fresh inducement to relocate, than to increasing costs to the Exchequer. By the 1970s large scale manufacturing was in any case retreating from the cities and the historical 'rustbelts'. Regional incentives merely increased the public cost of them doing so.

This change has been one result of Europeanisation. At the very moment that the creation of the internal market was increasing the vulnerability of weaker regions by the removal of protection, it was also creating a new system of inter-state competition which was weakening the nation state. The need for regional policy was intensified, but the national instruments for regional redistribution became blunter. This is the first major structural change which any new approach to regional policy must take into account.

A second is a change in the factors influencing industrial location itself. During the first industrial revolution, the leading manufacturing sectors were tied to sources of raw materials, energy, and access to labour reservoirs and to the ports of international

trade. With the rise of mass production the emphasis shifted to mass markets. It was the cities which industrialised and within which a new semi skilled labour force was formed. From the 1960s improvements in transport, the widening of markets, and the strength of urban labour movements all weakened the ties of industry to the cities. Over the past 25 years there has been a shift of manufacturing to smaller towns and the countryside.- the so-called ruralisation of industry. It is for this reason that traditional policies for regional dispersal came to run with the industrial grain.

At the same time, however, large scale manufacturing plants were losing their primary role as agents of economic development. The leading edge passed to the software industries, those concerned with design, conception and the shaping of markets and minds. It was R & D Laboratories, design engineers, advertisers, management consultants, finance houses and the so-called cultural industries that became the new growth activities, the post industrial head as against the industrial hand. The significance of these changes for industrial location is that the new knowledge industries, too, have tended to be concentrated in core regions, and these regions have in turn come to depend on a modern infrastructure (advanced telecommunications, international airports) and a large pool of technical software firms into the core regions, and it is the geographical preferences of technical labour which have come to have a decisive effect on economic location.

For regional policy, the problem of dispersing these industries is quite different from that of dispersing manufacturing or routine office functions. A concentrated district of designers cannot be removed from Milan to the Mezzogiorno as if it were a steel plant. The designers depend on a metropolitan urban culture. There are many of them, with links across industries and tied closely to the head offices of clients. Any policy of dispersal must therefore take on board the need to establish alternative poles of attraction, with their necessary economic and cultural infrastructure, and the wide range of specialisms. In the knowledge industries there are both economies of agglomeration, and the economies of urban 'scope'. It

is for this reason that a policy of dispersal must be a policy of 'counter cores'.

A third change is that the contemporary regional problem is an intra-regional as well as an inter-regional one. Depressed regions have their areas of growth, boom regions their zones of decay, particularly in the large urban areas. It was the cities which became the depressed regions of the 1980s, recognised as such in the form of the 'inner city problem'. Some thought that these urban problems could be treated within the urban context itself. They saw the economic strength of boom regions 'trickling down' to those who were residentially confined. But the 1980s confirmed that, far from trickling down, part of the boom was dependent on a low paid secondary labour market, and that jobs created were too often not those which the urban unemployed required. Labour shortage was found side by side with large scale unemployment, and no short term training or labour mobility programmes could bridge the divide.

Unemployment is not of course confined to the cities. It has always been a rural as much as an urban problem, particularly in those regions of the periphery where agriculture itself is in the process of being transformed. What is new in the 1980s is the persistence of high levels of unemployment in the Community as a whole, in spite of the sustained period of growth. Unemployment is structural as well as cyclical, and this further changes the context for regional policy. For it is clearly no longer enough merely to redistribute industry geographically, since this may amount to no more than the redistribution of unemployment. Regional policy needs to take on board the creation of jobs as well as their redistribution - in other words it needs to address the question of autonomous regional development.

To these considerations we add a final one, which is the growing concern for the qualitative as much as the quantitative character of growth. The needs of regional development have come increasingly to be defined in terms of the quality of jobs and working life, of a safe environment and an infrastructure which meets social needs, and of economic order which does not widen social divisions and put its society under siege. What is now called 'the quality of life' is

therefore as significant a regional policy issue in the weaker regions as it is in the core, and widens the scope of regional policy far beyond its original concentration on the financing of jobs.

Some of these changed circumstances require direct Community leval action. This is most evident in the field of locational incentives. The Commission needs to find ways of curbing the destructive competition between regions for footloose investment. The incentive system is one which is increasingly benefiting firms rather than regions. What is required is a standardisation of the incentives and an end to the auction of locations.

The Commission also has a central part to play in shaping a Europe of multiple cores, rather than a concentrated European triangle. The Community level transport and telecommunications policies, and the regionalisation of Community expenditures, would all contribute to this end.

But Brussels is right I think to see the main locus of regional policy initiatives at the national and regional levels. Over the past two years the Commission has opened the way for new initiatives by redefining its role away from being a distributor of funds to being a partner with national and regional authorities in providing Community assistance for development planning and finance. It has moved from projects to programmes, and this had further stimulated the production of development plans. It has pushed the responsibility for development down the line, and as a result has opened the way for a more pluralist approach to regional policy. But the question remains as to what those policies should be. What are the approaches which are relevant to the conditions - and questions - of the 1990s? This is the subject matter of the present report.

One critical area is the regionalisation of national policies. A number of countries - Britain is notable among them - have no adequate way of inserting regional priorities into the work of other Government departments and public corporations. There is no mechanism for regionalising public expenditure, let alone co-ordinating the different parts of government around specific regional goals. The development of 'counter cores' would clearly need this kind of inter-departmental co-ordination, not least because it is

clear that the new core regions have been decisively moulded by public expenditure decisions taken by Departments in an uncoordinated way. France has been more effective in this respect, reflecting their stronger tradition of central planning. But a similar effect is evident in those countries which have decentralised state structure, with strong regional governments. The more balanced and decentralised regional economies in West Germany, for example, can be partly explained by the importance of the Lander within the Federal structure.

The principal emphasis of this report, however, is on the regional rather than the national level, and in particular on what local regional authorities have done and can do to stimulate development within their boundaries. In the changed circumstances of the '90s it is at this level that regional policy should start. Local and regional governments are by definition closer to the specificities of place than are national or Community civil servants. They should therefore have prime responsibility for the preparation of regional strategies and plans. They are also in a better position to deliver many of the services required. In the course of planning and delivery there will be demands made on national governments, and the Commission itself for support. These upper levels also need their own plans and policies as we have suggested above. But with the decline of the nationally based incentive system of regional redistribution, and the shift in emphasis of regional policy towards autonomous development, it is the regional and local levels which are set to become the front line institutions.

What is striking about economic policy at this level is how wide ranging and significant it has been over the past fifteen years. Partly because of de-industrialisation and the rise of unemployment, there has been a growth of local economic initiatives throughout the community. They have been particularly marked in West Germany, Italy, Belgium and the UK, and they are being given increased importance in Spain and Greece. From the broad range of this experience, we can see a number of developments which are important innovations in industrial strategy, technology policy and in public administration, and have changed the way these issues are seen at the national as well as the local regional level. Indeed in some areas

it is clear that national policy is best pursued through local and regional agencies. In this sense the local is the national, and regional policy can be seen as playing an important part in realising national priorities, and is no longer confined to reducing regional inequality alone.

The report discusses ten areas of innovation, which are briefly summarised below:

i) Regional development banking.

Many regions have established agencies and enterprise boards, whose functions parallel those of development banks in the third world. They hold equity, provide venture capital and loan finance, engage in company turnarounds, sectoral intervention and technological upgrading. They provide specialist advice, and management services on an agency basis. they are engaged, hands-on institutions, whose aims are the promotion of long term development, even though they operate within strict financial disciplines. They are an administrative innovation which promise to be as significant in the last years of the twentieth century as public corporations were from the 1930s onwards, for they have the potential to play the role of 'social entrepreneurs' in any local economy. What is required is an expansion of this sector, allowing specialisation and a measure of 'co-operative competition' between them.

ii) Industrial districts, consortia and centres for real services

A number of Italian regions have pioneered what is now internationally known as the Italian model of local development, or 'diffused industrialisation'. Municipal and regional governments have supported networks of small and medium sized firms, by stimulating and part funding the provision of collective services which would normally only be available to larger firms. The encouragement of consortia between firms, the financing of centres of common services, and

sectoral infrastructure (like training facilities and industrial parks) have all been of central importance in the success of the industrial districts of the 'Third Italy'. The industrial strategy pursued of design-intensive, high quality products, produced by a flexible production structure which can respond rapidly to changes in demand, stands in strong contrast to the large scale mass production industries that were at the centre of earlier regional policy. In spite of - and in many ways because of - an apparent disadvantage in firm size, the Italian industrial districts have had a remarkable success in export markets, as have parallel regional economies in Baden Wuerttemberg and Jutland. Each of these regions has had particular social and economic histories - the Third Italy for example coincides with the former sharecropping part of Italy - which some have argued limits their replicability elsewhere. But the production principles that they embody, and the role played by local and regional governments, have much wider relevance.

iii) Technology initiatives.

There have been three main approaches to local technology policy. The first is technology led and involves the setting up of product banks, prototype workshops, searching patent registers for potential products, and encouraging commercial product development from existing public sector technological capacity (research institutes, public corporations). The second is enterprise led, and focuses on securing appropriate technological support to meet the particular needs of firms. The technology transfer centres in Baden Wuerrtemberg, the sectoral resources centres in Emilia, and the SPRI technology upgrading programme in the Basque country are all interesting variants of this approach. The third is to start from more general social needs - in the fields of energy for example, or urban transport, or health, or human centred work organisation - and develop technology and new products to meet them. This was one of the approaches adopted by the greater London

Enterprise Board's technology networks, and by Sheffield City Council. It has resulted in a number of major innovations, most notably the development of the world's first human centred robot integrated manufacturing system, a £4.5 million project between the former Greater London Enterprise Board, Rolls Royce, BICC and Dutch and German partners under the Esprit programme. It also avoids an overconcentration on technological hardware, in favour of integrated systems of provision of which hardware is but one part. What is important t about all three approaches is that regional agencies have helped to link public research capacity and public and private production. They have helped to provide the technological support to the SME sector and they have highlighted the alternative paths that technological development can take. For all these reasons they have had an importance which extends well beyond their own frontiers.

iv) The cultural industries and the environment.

Another field in which local and regional government have been pioneers is in the promotion of the cultural industries as a key part of an economic development strategy. Not only have these industries shown strong growth - in music, TV, video, film, theatre, radio, design, publishing - but they contribute to the creation of a thriving urban culture which is so significant a factor for the 'knowledge industries', and for qualitative growth as a whole. City centre planning and environmental policies have had a similar importance, and have in turn encouraged the growth of new products and jobs. Glasgow, Bradford and Rome are all examples of cities where strong cultural strategies have encouraged economic expansion, and have helped shift urban economic policy thinking away from a sole concern with the city as a productive apparatus, towards a view that takes as its starting point the quality of urban life.

v) Sector strategies and democratic planning.

Many regional authorities have followed a sector strategy approach to their industrial policy. This has been important not only for its insistence on a long term perspective, but also because it provides a common focus for all those involved in the local economy - enterprises, trade unions, user groups, and the many parts of the public sector. One result has been to show haw varied are the ways in which the public sector can support the growth of a particular industry: as public purchaser, pension fund investor, training agent, land use planner, environmental health officer, infrastructural developer and transport operator. This is a far cry from policies centred round financial incentives and industrial 'promotion'. The public sector has these powers by virtue of its day-to-day operations. Sector strategies have provided ways of linking them together around detailed aims.

A further quality has been to involve interested parties closely in the formulation of the strategy. Some authorities have set up 'popular planning units'. There have been public hearings and public enquiries, sectoral adult education classes inside and outside the workplace, appointment of people from the industry as temporary planners, conferences, radio programmes, economic newspapers, even music festivals featuring strategic issues. these processes have not only enriched the plans. They have provided a way of identifying paths of development which have a measure of broad based support, and of securing the commitment of parties on whom any successful planning process depends. In this sense, local sector strategies have been the focus for the emergence of an economic politics and administration of a new type.

vi) property and planning.

Most local and regional authorities have used planning powers to encourage economic development, and many have built subsidised factory space as a form of incentive. By and large these initiatives have been in support of what we may call 'fragmented market development'. There have also been attempts to actively develop an integrated property infrastructure around strategic plans for particular industries or broader social projects. The Italian industrial parks are an example of such 'social market development'. The municipal authorities have bought land at agricultural prices and passed the benefits on to industrialists, favouring consortia, particular sectors, and those agreeing to accept surface rights rather than land ownership itself, so that any future sale price would be based on the inflation adjusted original price. This system has used land ownership in support of planning powers and priorities. It has secured public control over 'founder's rent', and used this rent to finance development and secure the industrial mix required by the district. There have been other examples of this kind in Scotland, Sheffield and London - each confirming the value of the local authority acting as an integrated developer.

vii) Work, workers and the labour market.

One of the consequences of the early 1980s recession was to sharpen divisions within the labour market, between a core with market power, and a secondary labour force, weakly organised, low paid, and with little job security. Many municipal and regional authorities have sought to counteract this growing division, by expanding training, by using their power as employers and purchasers to establish good standards within their local labour markets, and by providing support to trade unions and labour resource centres. They have also taken a range of measures to try and reduce discrimination against disadvantaged groups who comprise the majority of those in the secondary labour market - women, ethnic minorities, migrants,

people with disabilities, lesbian and gay people and Gypsies. Municipalities have provided childcare facilities for working parents, and organised more flexible working times for those with domestic responsibilities.

Local authorities have also taken the lead in implementing policies which are being recognised as key national issues in the 1990s: working time; health and safety at work, human centred technology and industrial democracy. These are all aspects of the quality of working life, and have been promoted through such devices as enterprise planning, co-operatives, enterprise health contracts, epidemiological projects and hazard centres.

viii) multinationals and coalitions of countervailing power.

Among the most damaging events in a local economy are closures by multinational corporations. The employment efforts of a public authority can be cancelled overnight by such a closure, and the closed plants are - on European evidence - particularly hard to turn round as stand alone operations. To minimise this damage, some authorities have demanded national legislation to require community compensation from the parent firm of a closed branch plant. This is an issue which would best be dealt with at the EC level. Others have established early warning units to allow trade union and political campaigning against closure to begin while there is still time. There have also been some notable developments of European link-ups between branch plant trade unions, in particular multinationals. The Standing Conference of Kodak Workers is one striking example, and similar initiatives have taken place in Ford, Phillips and Unilever. In each case local authorities provided research and organisational support to what became known as coalitions of countervailing power, but although they achieved a measure of support from the European Parliament, they were weakened by the lack of backing from the nation states.

ix) Public services and parastatals.

A second group of large employers who have a major impact on local economies are national public sector services and parastatals. This is a particularly serious issue in centralised states, for there are inadequate mechanisms for linking the operations of these national bodies to local and regional requirements. Airports, railways, the post office, coal and steel, public research laboratories, power generating authorities, together with other public services and administration may make up a quarter to a third of local and regional employment, but are locally unaccountable.

Again local authorities have worked with trade union and user groups to produce alternative strategies for these industries - transport, health, energy, telecommunications and the postal services. They have developed detailed proposals about how services could be improved locally and integrated into local plans. However, it has often been harder to influence the public bodies than private ones, and it raises the broader question of how to make public authorities in Europe more accountable to the localities and regions within which they work. The success of local sector strategies suggests that this accountability should start at the planning stage, in line with the new forms of decentralised administration being introduced in both the public and the private spheres. The co-ordination of public sector planning and investment is of ever growing importance for regional policy at a time when the direct influence on private sector investment is becoming increasingly expensive and blunt.

x) Consumers and community groups.

There has been a growing recognition of the importance of the new social movements for the direction of economic development. Consumer groups, the women's movement and environmentalists have all had substantial influence on the development of particular sectors. They have acted as watch-dogs,

inspectorates, early warning systems, and advocates of alternative long term strategies. They have often provided an integrated view of a problem, against the sectional views of firms and government departments. Their pressure has been an important source of innovation and ideas, and they have also developed as a strong political force for changes at a national level.

Local and regional authorities have been among the first parts of government to recognise the importance of these movements for economic development. They have provided grants to strengthen them - women's employment groups, black groups, tenants associations, homeworkers action groups, consumer groups in food, transport, health care, broadcasting. They have appointed their representatives on employment and training committees, and have held open forums. They have helped magnify a voice.

What runs through these initiatives is the critical role of local and regional authorities as co-ordinators. In most parts of Europe, co-ordination is primarily vertical. On the industrial estates there are branch plant factories. In the high street are the branches of the retail chains and the banking and insurance companies. The local railway station, like the local post office or telephone exchange, are all integrated vertically with the head offices above them. Co-ordination between them is weak. Yet much depends on effective 'horizontal co-ordination'. Labour markets, urban property and the pattern of a city and its transport networks, are all predominantly local and need to be planned as such. So are many of the links between enterprises, and between different parts of the state. Local and regional authorities have been trying to improve this horizontal co-ordination in the interests of these local strategic goals. Some of them have also recognised the importance of a thriving local culture. Many of the most successful regions in Europe have depended for their success on such a broad view of the process of economic development. As the Commission encourages national and regional plans as a means of counteracting continuing

regional problems, this is perhaps the prime lesson it should draw from the rich and varied experiences of recent regional economic information.

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# Regional Economic Policy in Europe in the 1990's in the light of the experience of the 1980's

In the past decade, all over Europe and North America, regional and municipal authorities have been pioneering new forms of economic intervention in their local economies. The immediate occasion for these initiatives were the slumps of the mid 1970's and early 1980's. This hastened the de-industrialisation of many of the 'smoke-stack' and 'rust belt' areas, and raised unemployment levels in some regions to over 20%. The long upturn which followed only slowly reduced these levels, as aggregate unemployment remained high, and the process of de-industrialisation continued. What became clear was that it was not just a regional issue it, it was also an urban one. Even the cities in prosperous regions had extensive zones of economic hardship and industrial decline which too commonly remained insulated from neighbouring areas of prosperity. It was the cities which were the distressed areas of the 1980's.[1]

Since national macro policies were increasingly blunt in solving these regional problems, local and regional councils took their own initiatives. At a meeting of European regional authorities in Bilbao in July 1988, there were some twenty development banks or similar agencies which had been set up in declining regions during the previous 10-15 years. At a similar meeting in Bologna in November 1989, there were not only agencies, but a large number of local and regional councils who had also been directly involved in economic policy.

Not all these initiatives have come from de-industrialising regions. Some have been in peripheral regions still on the path of initial industrial development. Others have come from prosperous regions. Indeed one of the striking things about the last 15 years, is how some of the most successful regions in Europe over this period such as Baden Wuerttemberg in West Germany, or Emilia Romania in Italy - have had municipal and regional governments playing an important

economic role within them. They have acted as agents of support and synthesis in areas of 'diffuse industrialisation' - that is to say areas with small and medium sized industry. One of the questions in reviewing the experience of the 1980's is how far declining and yet to be developed regions can learn from these cases.

It is the sheer variety - of circumstances and type of initiative - which has been perhaps the greatest strength of the regional economic movement of the 1980's. There has been no one way, no one model.[2] The demand has been for action and results - always a good discipline in the field of policy. But such an approach has its own limitations. Micro job programmes may destroy jobs in creating others. With given demand, the rescue of a firm will not add to economic output, and may merely preserve outdated capacity. Financial incentives and cheap premises can merely subsidise particular firms, with little if any overall economic impact. One of the charges against these initiatives is that they hinder the process of restructuring. Another is that they are trying to drain the ocean with a teaspoon. Both points have substance. What may appear as a positive initiative when presented as a photograph of a council leader opening a factory building or saving a firm, seen at a distance will be no more than a feather on time's flow. There is a danger that local economic policy may be a form of publicity for local councils - part of the post modern politics of symbols and signs rather than a significant contribution to the economy of substance.

To dismiss the new local economics for these reasons would be to take the position of a destroyer not a creator. Like the Duke d'Orléans who, in 1789, considered the revolution and decided to ignore it, so those who view the economic achievements of local and regional governments in the 1980's with the same disdain are failing to recognise a movement which promises to have long run historical significance for not only particular local economies, but for the pace and quality of macro economic growth as well. I shall argue that it is as important as that. But for it to be so, local authorities must stand back from what they have already achieved, and consider their work against the broader background of macro economic

development and social trends. It is only by connecting with these that the full potential effects of local economic activity will be realised.

If the virtue of the local is action and diversity, its vice is parochialism. There is often a sense amongst both politicians and officers that broader long term questions are not for them - they are the province of higher levels of government - national and international. This I believe to be mistaken. Economic policy is not a question of levels but of arenas. The local is the national, just as the national is the local. Those directly involved with particular firms and sectors at a regional level are commonly in a better position to consider these issues globally and devise policy accordingly, than are national or European planning bodies cut off in metropolitan bureaucracies. The most significant of the local economic initiatives have been those which have developed a coherent local strategy that can be seen to have a bearing on broader economic and social policy. I say 'most significant' without wishing to minimise the achievements of more eclectic councils. But I feel firmly that it is now important for all those concerned with regional economic policy to begin to make these connections.

For the bulk of the post war period regional policy was about redistributing growth geographically. It can no longer be so confined. What we know now is that policies based solely on geographical distribution of micro activities have not worked and are not working. We also know that the freeing of the internal market within Europe from 1992 is likely to increase regional inequality, as local protective barriers come down. The question is as urgent as that.

It is often the case that new historical developments emerge from the fringes - areas less bound in to the confirmed structures of the centre. Politically it is the new social movements which have set much of the agenda for the nineties. In economic policy it is the local which constitutes the fringe and whose work - significantly closer to the new social movements - contains within it the seeds, and in some cases the fruits, of the new agenda. This paper

therefore covers three things: in the first part the broader context for regional policy as it has been emerging in the 1980's; in the second part the experience of local and regional councils in the economic field; and in the third, the implications of both macro and micro developments for regional economic policy in Europe in the 1990's.

# I

## The Changing Context of Regional Policy

### Software regions and technical workers

In the early period of capitalism in Europe, the location of the leading sectors of industrial growth was tied to the availability of material inputs (coalfields, water-power, and ports for the overseas sources of supply) as well as labour from the land. With the diffusion of mass production (the so called Fordist phase) the centre of gravity shifted to the main domestic markets. The large processing and assembly factories were built on the periphery of the major conurbations - Turin, Milan, Paris, London, the West Midlands. In the past 25 years there has been a new shift. The improvement of transport, the internationalisation of markets, and the strengthening of labour (and land prices) in the conurbations has led to the 'ruralisation of industry'. There has been a flight of manufacturing from the large cities to greenfield sites, to less developed or depressed regions within the country, and from the 1970's onwards to the peripheral areas of Europe and the Third World. The industrial development of Ireland, Portugal, Spain and Scotland has been centred on the peripheralisation of Fordism organised for the most part by multinational companies.[3]

As industry dispersed, new core economies were emerging. They reflected the change in competitive focus within industry from manual production to innovation, design, marketing and long term strategy.[4] These are the subjects that are given priority at Business Schools, and their significance has led to the rapid growth of business service sectors concerned broadly with knowledge, culture and control. This is where the money is and where the jobs are. The corporate head has been growing relative to the industrial hand, and its growth has been concentrated in the new core regions.

One feature of the 'knowledge' industries is that they are found in clusters. The great economic cities of Europe have always had their financial districts and their cultural quarters. These have now

expanded and multiplied. There are special areas of design and advertising, of software houses, and management consultants. Within the wider core regions, Europe has its electronic corridors and high tech centres, just as America has Silicon Valley and route 128.

These clusters are reminiscent of Alfred Marshall's industrial districts. Marshall was analysing agglomerations of small manufacturers, specialised, sharing out work, competitive yet co-operating. In the new service and cultural districts, not all the firms are small. In sectors like software or management consultancy, there are a core of large firms, surrounded by a mass of small ones. But they nevertheless exhibit levels of specialisation and interdependence reminiscent of those analysed by Marshall.[5]

There is an immediate significance here for regional policy. Mass production branch plants tended to be relatively cut off from their local economies. It was a point made by Vernon in his study of New York in the late 1950's, and it has been reinforced by the growth of multinationals and their extension of an intra-corporate division of labour.[6] It has allowed Fordist plants to become de-localised, with only weak ties to any particular place. Traditional regional policy assumed just such a locational mobility, aiming to direct the relocation of industry to target regions through a mixture of incentives and controls.

With industrial districts it is quite different. To move part of the steel plant to the Mezzogiorno is one thing; to shift the design industry from Milan to Calabria is quite another. Not only are the firms in a sector closely linked to each other, but as a service industry they need to be near their clients - other parts of the collective corporate head. In this sense we can speak of agglomerations of districts - tied into each other, and to the centres of political and cultural power. Strategies of dispersion clearly have to go beyond the traditional instruments of incentives and controls on individual firms.

There is a second feature of the new 'knowledge industries' of significance for regional policy. It is that they are 'human capital intensive' being heavily dependent on a cadre of skilled professional and creative workers. Some firms now acknowledge this by developing accounting systems in which labour is recognised as an asset rather than a cost. But whether or not it is reflected formally in the accounts, there is a recognition in these industries that it is labour and effective systems of organising labour which will determine competitiveness - rather than fixed capital.

One implication is that we need to understand the new core regions as peculiarly dependent on the economy of skilled professional labour.[7] This labour is drawn from a national and international labour market. It is concentrated in core regions because that is where the jobs are - and at the same time firms dependent on that labour are bound in to the core because they need access to this concentrated labour reservoir. There is a process of cumulative causation which systematically drains peripheral regions of skilled labour.

Where did the spiral start? Historically it seems that a number of research institutions played a critical role: universities, public and private research laboratories, a few large knowledge intensive firms. They formed a spine together with the infrastructure associated with human capital intensive production - international airports, and advanced telecommunications networks.[8] Most of these were publicly planned and funded, as was the defence procurement which underwrote the new pattern in France, Britain and the USA. Once such a spine was established, it has proved difficult for firms requiring the particular types of professional labour not to locate in the 'software' regions.

The process of cumulative causation is itself influenced by a further factor - the preferences of the professional cadre themselves. For the younger ones this takes the form of an abandonment of the provinces and of suburbia for the metropolis. It is not simply an economic decision but a cultural one - the desire to experience the modernism of the metropolis, to sacrifice the old in order to embrace the new.

Many of the new industries themselves depend on just such a metropolitan modernism, so that it becomes difficult to distinguish the cultural and the economic. We can go so far as to say that culture itself has become embedded in modern production. It has become an independent force of production, which is why the conditions for its production - the work and private lives of the cultural service workers - have become of such central economic importance.

There is a second, in some ways contradictory side, of the professional cadre - one which seeks refuge from the city. These, too, are preferences reflected in the drift from rust belt to sun belt, from town to country, and from North to South. They are reflected in the environmental movement and the concern with what market researchers call 'the quality of life'. They comprise a kind of 'hidden attractor' to industrial location, serving to restructure space between regions and also within them. They have encouraged growth to take place on greenfield sites, away from the inner cities and the visual memories of the mass production age. It was always seen as somewhat anomalous in location surveys that owner managers sited their plants near golf courses. With hindsight we can see these results as symptomatic of a wider trend. For the first time a qualitative consumer culture has become a determinant factor in location and thus in regional policy.

The general conclusion I draw is that spatial hierarchy remains but in a restructured form. Michael Marshall in an excellent study of the history of regional inequality in Britain and its links to long waves of economic development , describes the shift as one from inter-sectoral spatial divisions of labour (between the mid 19th Century and the 1960's) to intra-sectoral ones from the mid 1960's onwards. He sees regions as "specialising in different sub-sectors within the same industry, such as research and development, component manufacturing and final assembly", and contrasts the knowledge intensive electronics firms in the South East of England along the M4 corridor, with the semi-skilled assembly electronic factories in Scotland's silicon glen.[9]

Similar patterns can be found in other European countries and in the United States. Behind them are particular material conditions. In the era of mass production the powerful locational pull was proximity to markets. Now it is technical labour and its associated infrastructure that has become the dominant factor in shaping the hierarchy of space. This is the first feature of the new regionalism.

**Inner cities and the intra-regional divide**

A second feature is that there are sharp divides within as well as between regions. Depressed regions have areas of growth - for no city is untouched by the expansion of business services and the cultural industries, and many provincial towns have seen their industrial estates expanding, whatever their location. Equally, the core regions have their areas of decay. These tend to be concentrated in the industrial belts, where manufacturing has given way to warehousing, superstores, and long periods of dereliction. There are cases where the new leading edge industries have been sited on the remnants of the old - London's docklands being a vivid example. But more commonly the new have sought to distance themselves from the old. They have removed work and workers to rural or heritage areas separated geographically from the culture and politics of the industrial past, and from the living areas of the low wage workers of the metropolitan present. The dualism of the contemporary labour market and of occupational structure has been reflected in the shaping of space within as well as between regions. It is the basis of the inner city problem and the high rates of unemployment still found in the most prosperous cities, and is too often reinforced rather than mitigated by a regional policy geared only to inter-regional inequality.

This conclusion goes against those economic models that suggest that the wealth of the new knowledge industries and their core workers will trickle down to all those in the region, and that inner city problems are the result of imperfections in the housing market and social security system rather than in the structure of the industrial economy itself. But urban industrial and labour market studies suggest that patterns of sub-contracting, of training, and of terms

of employment, reinforce segmentation in the labour market, and ensure that benefits of growth are not passed down to the secondary labour force. For the low paid - and for women in particular - the barriers to mobility are both economic and geographical. The time and cost of travel restricts the range of local labour markets and makes many into prisoners of the residential ghettoes.[10]

Regional and inner city policy have often been at odds. The experience of the 1980's demands that they be brought together. Regional policy should not be directed solely at the poor regions, nor should it neglect the structural inequalities within the regions. If there is a sense in which the cities are the depressed regions of the late 20th Century, then regional policy must re-orient itself accordingly.

Europeanisation

The third change in context for regional policy is the advance of Europeanisation, an advance which will be hastened by the coming of the single market in 1992. Whereas between 1930 and 1960 the leading edge of manufacturing was turned inwards and regions were oriented to the domestic market, they now face outwards to the rest of the Community. Put another way, the process of European integration has been to establish the whole community as a single domestic market, just as Italy and Germany established their single internal markets more than a century before.

The core regions of Europe are no longer primarily national centres. Their industries, like their governments, are increasingly tied into European markets, and are now cross investing to provide integrated European services. The window to this movement is provided by the rapid growth of business travel between the airports of Europe. These movements describe the structure of an emergent single European core - the golden triangle as it has long been called, and although the triangle is geographically more a federal than a unitary

structure (each core looks inwards as well as outwards, still sees itself competing with the other cores) - their integration is already such as to require regional policy itself to be integrated on a European plane.

Let me give an example. Earlier I suggested that modern core regions resisted decentralisation because of economies of agglomeration in their growing service industries. One such economy is the privileged access to the communications arteries to other European cities. The air transport system has increasingly been moving to a hub and spoke structure, diminishing the direct connections between provincial centres. The aerospace companies, the airline majors and the core airports have each strong interests in this spatially centralising system. Any general move to diffuse the knowledge industries in Europe would have to address the structure of the airport network, and this could only be done at the European level.

There is another side to Europeanisation which has direct bearing on traditional regional policy directed to footloose investment. The integration of the European market and the improvement of communications has increased the mobility of manufacturing. With better roads weakening the ties of factories to markets, the key determinants of location became labour costs and tax rates, and the comparisons have increasingly been made at a European level. Multinationals have been able to bid one government - and one region - off against another, and they have done the same to national trade unions. As a result they have exerted a downward pressure on the level of wages and the labour contract, and have provoked a war of incentives which has reduced the rate of public return from any given large scale footloose investment.

To persuade multinational mass production to site itself in a particular area the local or regional government (supported nationally) must offer ever greater incentives. In the Italian mezzogiorno for example the concession for new investors of employer

social security contributions of 8.5% of wages and salaries in 1968, was gradually raised to 27% of any new labour hired by 1979.[11] This kind of bidding up was taking place throughout Europe from the mid 1960's. Seen as a system it is self cancelling.

Indeed the overall result was not to increase the influence of regional incentives over investment - they were acknowledged to have become increasingly expensive and blunt - but to lower the net tax paid by firms to governments. Just as in the private market competition between firms reduces prices to the level of long run average costs so in the public sector inter-regional competition bids down the price which firms have to pay governments out of their profits. In the case of such inter state competition the government's long run average costs are the costs of public investment necessary to support any particular investment, and the opportunity cost of the net tax foregone on other operations which would use the resources. For the depressed and less developed areas of Europe these opportunity costs are minimal; and the indirect benefits of new private investments are such as to lead most governments to discount even the direct public investment costs. In social (and political) cost benefit accounting the cost floor for any government may be zero and even negative when it enters the bidding for new footloose investment. One of the few detailed micro studies of this looked at Ford's £180 million investment in South Wales in the late 1970's and found that £150 million of the total was covered by the British government through a range of subsidies and offsets.[12]

Seen as a whole the system of incentives did guide footloose investment to some parts of the European periphery rather than others. But by the 1970's the incentives were running with the Fordist grain - manufacturing plants were anyway moving to the periphery - and Europeanisation has meant that it is the negative fiscal effects rather than the positive locational ones which most stand out in recent years.

The point is particularly clear in those countries like Ireland which are small and effectively a region in themselves within a European context. Ireland started its incentives system early in 1956-8 aimed

initially at labour intensive international investment serving the UK market, as well as tax haven manufacturing companies. By the late 1960's the flow of this type of investment was falling off, while some firms closed down to seek new tax incentives and cheaper labour elsewhere. The Irish government then increased its financial package with a view to attracting heavy fixed capital plants which would be more difficult to close down and relocate. By the late 1970's the cost of these incentives and the small net return to the government from the main manufacturing profit producers in the country had led to a fiscal crisis which has persisted through the 1980's. Hong Kong and Singapore similarly found their multinational low cost labour industries squeezed between rising wage costs and escalating incentive competition from abroad but managed to develop an upgraded industry from the initial base. Ireland suffered this squeeze without being able to establish a large enough complex of indigenous investment in the process.[13]

The consolidation of the single market bears on regional policy in multiple ways. Harmonisation weakens the protection and preferences that governments can give to particular regions; it reinforces the emergent hierarchies through closer integration of the cores; and by further freeing markets and capital mobility it induces an incentive competition between regions and localities whose ultimate beneficiaries are the investors, and whose ultimate costs are born by the exchequers. This is all the more serious when the pace and character of accumulation has failed to absorb the unemployed at the level of the Community, and when regional policy - both between regions and within them - cannot solely be about distributing jobs but has to address the overall unemployment problem as well.

Globalisation and the weakening regulatory powers of the state is one feature of late Fordism, along with the other changes I have identified, - the dematerialisation and delocalisation of manufacturing production; the growth of science and of culture as independent forces in production, and their embodiment in distinct and clustered service industries; the sharpening of a dual labour market and the increase of income as of geographical inequality. It is a picture which is particularly clear in Britain - not only

because of the neo-liberalism which has characterised its government in the 1980's, but because Britain has a strong representation of Fordist methods and culture in both its industry and wider social and economic institutions. The regional patterns I have cited here have clear parallels in the United States, and to some extent in France, both countries with strong Fordist industrial structures and, in the case of France, with a long tradition of political and locational centralisation as well.

**Diffused industrialisation**

I want to finish this first section by highlighting a counter movement, one which is stronger in West Germany and Italy, and in parts of Denmark, and which has emerged as an alternative path to traditional mass production. I refer to the phenomenon of diffused industrialisation - industrial districts of small firms, closely interdependent like the small knowledge intensive services I discussed earlier. Their most famous home is in the 'Third Italy', that area of former mezadria farming stretching down from the Veneto to Emilia Romagna, Tuscany, Umbria and La Marche. The astonishing success of Italy in the exports of light industrial and engineering goods (see Figure 1) owes much to the small and medium sized firms in these regions: the tilemakers of Sassuolo, the woollen garment producers of Carpi, the cloth makers of Prato, the engineering firms of Modena and Bologna and so on.[14]

If we take one industry - footwear - as a case study of this achievement, we find that whereas the large scale mass producers of the UK, France and West Germany all declined during the 1970's and 1980's, the Italian footwear industry grew so that by 1984 its exports exceeded the output of all its three major European competitors combined. Whereas the average size of a British footwear producer was 110 workers, in Italy it was 17 (excluding from that figure the very small artisans). As with furniture, clothing, food processing, and machine building, the Italians have demonstrated that there is an alternative way to Americanised mass production, one which has proved more competitive in many sections of the European market.

What is important about this experience for our argument is that the Italian industrial districts have found a way of applying the scientific and culturally creative elements of production without being dependent on a head office or separate specialist industries located in the core. Carpi's woollen producers do make use of designers from Milan - but they provide many of their own designs, as do the impanatori in Prato. The engineering industries in Emilia have grown as much through indigenously developed adaptive technology, as by the application of specialised R&D. Indeed it is an important part of the Third Italy's success that they have found ways of integrating design, innovation, production and the market in a way that large scale producers - with clear demarcations between functions - have found much more difficult. In this they are developing in parallel with the large scale Japanese producers, who likewise emphasis the importance of continuous innovation, strong horizontal links between different functions, and close inter-relations between suppliers, assemblers and markets.

They have shown that there are forms of production where the creative and cultural element can be supplied locally - and that indeed it may be more effective in some sectors than where it is produced by separated specialists servicing mass producers. They have also shown that effective manufacturing need not depend on mobile large scale factories, but on more geographically stable clusters of small and medium sized producers. In spite of the rapid growth of research on these districts over the past fifteen years, there are still many unanswered questions: how far can they continue outside international marketing groups; do they depend on growing income inequality and the servicing of luxury consumer markets; can the specific cultural conditions of the industrial districts - linked as they are to the family structures, the skills, and the working rhythms of mezadria agriculture - be sustained in younger generations; how far does their competitive success depend upon sweating and what labour market economists refer to as numerical labour flexibility? The answers seem to vary - by time as well as place. The furniture industry of the Veneto is different from that of Poggibonsi. 1990 is different from 1985. As one commentator put

FIGURE I

## Italian exports as a share of world exports in selected commodities, 1978-8

%ages

| | 1978 | 1984 |
|---|---|---|
| Glazed ceramic materials | 58.6 | 56.4 |
| Cement and artificial stone products | 16.4 | 28.5 |
| Handbags | 39.9 | 35.1 |
| Leather footwear | 39.6 | 33.7 |
| Rubber and plastic footwear | 39.8 | 34.8 |
| Men suits | 18.1 | 21.9 |
| Mens trousers | 9.0 | 13.7 |
| Men's cotton trousers | 8.3 | 15.2 |
| Jersey's and pullovers | 40.0 | 30.1 |
| Woollens jerseys | 28.2 | 31.6 |
| Synthetic jerseys and pullovers | 40.0 | 30.1 |
| Clothing accessories | 18.3 | 21.5 |
| Furniture | 19.5 | 21.7 |
| Wooden furniture | 21.0 | 23.5 |
| Chairs | 26.3 | 28.0 |
| Leather clothes | 14.7 | 11.6 |
| Wine of fresh grapes | 21.7 | 22.0 |
| Metal storage tanks | 9.7 | 41.0 |
| Steel storage tanks | 9.9 | 42.0 |
| Iron and steel, nuts and bolts | 9.7 | 11.1 |
| Locksmith wares | 11.7 | 12.3 |
| Cultivating machinery | 7.8 | 13.0 |
| Weaving and felting machinery | 6.9 | 10.2 |
| Looms | 4.0 | 7.0 |
| Paper product machinery | 6.9 | 9.6 |
| Non domestic refrigeration equipment | 15.7 | 14.2 |
| Domestic refrigerators and freezers | 32.8 | 27.9 |

United Nations, International Trade Statistics Yearbook 1984, New York 1986.

it, the districts often seem to be in continual crisis, but it is their capacity to adjust to and through crisis, which has been part of the secret of their success. In spite of the incredulity of the mass production mind - both on right and left - the industrial districts are holding their own. Emilia Romagna remains one of the fastest growing regions in Europe. The streets, shops and factories of Bologna, Modena and Carpi show that diffused industrialisation is a material option for industrial and regional strategy.

There are similar regions elsewhere in Europe - in the Baden Wuerrtemberg area of Germany, where Mercedes Benz and Bosch have provided a focus for small and medium firm networks particularly in the engineering industry.[15] In Jutland, where the growth of specialist high quality producers like Lego, Danfoss and Bang & Olufsen have combined with a strong co-operative tradition to produce a diffused growth in a region marginalised by mass production.[16] France and the UK are much weaker hosts of manufacturing industrial districts,[17] but in Spain, Catalonia is growing its own version of the Italian model.[18]

We should note, too, that there are counter tendencies even in volume producers to delocalisation. Just in Time techniques have encouraged the clustering of suppliers around the main assemblers. The concern of Japanese companies to have close two-way relations with their suppliers and users, and to build up a network of innovative capacity also cuts against the trend to international sourcing. The mass retailers - both in food and clothing - are shifting their sourcing to domestic suppliers, again to secure a capacity for rapid response and just in time delivery. As with the industrial districts, these factors work against the locational liquidity of the footloose mass producers. They seek a more stable location, where quality and innovation may be as significant as costs.

These shifts in focus, and the greater local interdependence which they imply, suggest the need for a quite different approach to regional policy than the quantitative schemes of grants and concessions. As the Italian and German cases have shown, local and regional government comes to play a central productive role in

diffused industrialisation, in the fostering of networks, and the provision of common services. If the forces of internationalisation demand a new role for European government in regional policy, the forces of diffused industrialisation require new roles for local and regional government. This tension between centralisation and decentralisation is an irreducible feature of modern production. It is not a question of levels but of forces. Any structure for regional economic initiatives must reflect both.

## II

## The Experience of Local Economic Intervention

The distinctive feature of local economic policy over the past decade is that it has been primarily concerned with supply side policies. In this it stands in contrast to the dominant tradition at the level of macro national and international policies which has concentrated on the management of demand and money. The reason is simple. Most of the local and regional governments have limited scope for operating Keynesian-type policies within their own economies. They are not monetary authorities. They cannot raise tariffs or impose import controls. Most of them - particularly in the non Federal states - have limited powers of taxation, and in any case are restricted from pursuing a regional fiscal policy at significant variance to the national one.

Historically there have been exceptions. In the 1930's the Austrian town of Worgl created its own local currency with which it paid for an expansion of local public employment, and whose rapid circulation (secured by a monthly depreciation of 5%) resulted in full employment being restored within a few months. The experiment spread in Austria and the United States (via Irving Fisher) during 1934 until it was suppressed by action of the respective central banks.[19]

In the field of protection, many municipalities have favoured local companies in their purchasing policies, but this has now been restricted by EEC contracting rules.

Fiscally, increasing levels of local taxation for local public spending can in principle serve to raise the local propensity to consume and, since state spending tends to have a higher local content than private consumer commodities, stimulate the local productive economy in parallel. Property taxes are particularly effective from this point of view since they are a tax on land rent, and can be used at the same time as part of a land use planning and property policy. But in a number of countries, central government

has placed severe curbs on the freedom of local authorities to fund sharp increases in public spending through local taxation and it has been unduly neglected as a potential economic instrument as a result.

The limits to these macro powers has forced local authorities to develop policies of intervention on the supply side and in the labour market. Some have been concerned with quantitative growth of jobs through the encouragement of labour intensive production for example or through improvements in productivity, feeding through to increased profitability and from thence to growth and the further expansion of employment. The first of these is seen to create jobs in the short term, the second in the long. They may contradict each other - if the labour intensive process fails to raise productivity and therefore long run growth and employment - but they need not do so, as we shall see in the case of diffused industrialisation. There are schemes, too, for direct job expansion, whose net effect may be positive where the expansion is funded via the fiscal mechanisms discussed above, or where the growth of jobs come through the redistribution of working hours (via the cut in overtime for example).

Others have concentrated on qualitative growth, on the kind of jobs, and the kinds of production encouraged within their localities. In some instances this emphasis has itself led to an unexpected stimulus to quantitative jobs as well. The promotion of environmental improvements, the cultural industries, or organic and ethnic foods all proved to be fast growth sectors which were embarked upon for qualitative reasons.

But whether the main thrust of the policies is quantitative or qualitative, the local experiments have extended the range of initiatives from those conventionally pursued by national industrial policy - which in most EEC countries has been one of the less effective branches of national economic management.

In this section I want to briefly discuss ten features of local economic strategy which have proved valuable in promoting regional development.

## 1. Development Banking

Many cities and regions have set up development agencies whose task is in part to intervene in support of small and medium sized enterprises. Such agencies have been established in the Basque country, in Nord pas de Calais, in Saarland, Wallonia, and in Sardinia. In the UK they are called Enterprise Boards, of which there are six main ones.[20]

Their functions and strategies vary. The West Midlands Enterprise Board sees its main task as providing cheap long term finance for medium sized companies.[21] The Basque country's agency SPRI, puts its emphasis on finance for new and innovative companies, and has a separate venture capital company in addition to its programme of subsidised loans.[22] Wallonia's SRIW had by late 1987 invested 13 billion BF in 161 companies, half of whom had over 50 workers, and 22% over 200 workers.[23]

The various fields covered include company turnarounds, long term funds for expansion of existing firms, finance for technological upgrading, venture capital funds, simple loan subsidies, the promotion of new forms of ownership such as co-ops or municipal enterprise, the provision of specialist advice and technical support, and of management services on an agency basis, and the restructuring of particular sectors. Some have restricted their funding to loans, but many have taken equity shares, and in some cases have a portfolio of majority or wholly owned subsidiaries.

For the moment the important point is not which elements of this package are emphasised by particular agencies. They all differ, for there is no common model. But what distinguishes all of them is that they play the role of an active promoter and supporter of projects. Unlike passive commercial banks (I speak here from British experience) the regional agencies are 'pro-active' in their outlook. They are entrepreneurial not for profit but for particular development goals.

In this the regional authorities of developed countries have much to learn from the developing world. For development banking has a longer tradition in the third world - there were 237 formally designated development banks in the mid 1980's - and their experience has shown the strengths and some of the problems of this kind of institution. They were set up - just as the European and North American regional agencies were set up - because of the inadequacies of the private banking system. The development banks were to take the long view. They were to take non market factors into account, giving weight to social and geographical priorities. They were industrial 'animateurs', providing technical advice and in some cases training, to new and existing projects. They proved themselves by and large less bureaucratic and more effective development agents than industrial ministries.

By the 1980's however, many of them were in crisis. Commercial banks had moved in to some of the fields established as successful by the development banks, and thus became direct competitors. The development banks were not generally allowed to follow the commercial banks into financial supermarketing - the offer of a range of financial services - which has been one of the trends of the 1980's. The economic crises of the mid 1970's and the 1980's - and the World Bank's programmes of 'structural adjustment' - drastically weakened many industrial sectors and thus the portfolios of the development banks. At the same time - as public sector bodies - they were kept short of funds in spite of having piled upon them the non-valorisable priorities of governments. They found themselves squeezed between a tightening market and a retrenching yet demanding government.

The European regional agencies have faced something of these pressures. On the one hand they have been established as commercial, with an ethos often affirming their similarity to the private sector rather than the public. There is a pressure for profitability and avoidance of loss-makers in order to show that a public enterprise can be as effective financially as a private one. At the same time politically and economically the agencies are pulled towards their socio-economic function: to help firms in difficulty; to take a long view; to exemplify broader goals on working practices, and product

quality or the environment. They are asked to act as a catalyst for a region, but often restricted - for financial and political reasons - from reaping due rewards from catalytic gains. Because of their political profile they are watched with far greater attention than any private bank, and judged not against the broader socio-economic balance sheet, but against the ledgers of the private market. To give only one example: unemployed people in the UK cost the public exchequer at least £100 a week in social security and tax foregone. Few enterprise board investments undertaken for primarily local employment reasons involved public funds of more than £20 per job week. In this sense the enterprise boards could hardly go wrong. But so strong is the ideology of the private as against the social market that politically any such loss making projects were considered failures in spite of their public cost benefit success.

What lessons can we draw? These agencies have already shown themselves as key institutions for the carrying forward of public policy in the economic field. The dominant neo-liberal view on policy is that the public sector will always be inferior to the private in productive activities, and that policy should be confined to regulations and determining the conditions within which private firms can work. Governments should set rules, and appoint the referee, but should not trespass on the field of play. The counterview has always had the problem of economic institutions. Either intervention was directly controlled through a bureaucracy, which too often was so far from the immediate problems of production that their directives were inappropriate; or the intervention was through a public corporation which had the features of a private monopoly.

The regional development banks are an administrative advance on the public corporations. They operate close to but just behind the front line of production. They occupy a crucial economic space for small and medium enterprises, by providing services normally available only through the head offices of larger firms. In other words they provide some of the economies of scale of large firms to networks of smaller independent enterprises. These economies include privileged finance, technical and managerial support, training, strategic

planning, and access to a wider network of contacts in the economic field. They act as it were as a flexible head office, and like a head office can intervene more directly through shareholdings and where necessary through control. In a period when it is no longer economies of scale in production which are important, but economies of scope and systemic organisation, development banks can play that role as co-ordinators of scope and of a cross enterprise system.

That is their potential role. How they accomplish it effectively is another matter. Between the idea and the reality lies the shadow. My own view of how to achieve effectiveness would be through (a) 'formation'; (b) small basic units; (c) specialisation; (d) pluralism.

- the urgency of the tasks and the requirements of the political cycle has meant that there has been too little time spent on the formation of a staff with the necessary range of skills and a common outlook. The major constraint for the new development banking is not finance but staff. The boards have drawn their staff from the private sector, from trade unions, from voluntary organisations and the universities, and it has been this variety which has given them much of their energy and their fresh approach. But there are inevitably tensions: each needs the other's skills. They must all develop a common culture for the new mediating, productive and social role. This is why a more systematic programme of long term formation (the French word lacks the mechanistic overtones of the English word 'training') is of the first priority.

- There is much to be said for keeping the development banks small and specialised, with co-ordinating mechanisms between them. On the basis of those development banks I know I suspect that institutional effectiveness is more likely with banks of up to 40 workers, with expansion being achieved through spin offs of a small group of existing staff.

- There are advantages too, in **specialisation**, both by sector and function. The Wallonian SRIW has established a wholly owned subsidiary for example to provide scientific, technological and marketing services to companies in the agro-food sector, and there is scope for sectoral development banks at both the regional and national levels.

  As far as specialisation by function is concerned, Massachussetts has developed an effective model, with separate quasi publics for turnarounds, development finance, venture capital, and new product development. Each has a small staff, with unpaid boards of directors who are asked to make available their know-how as a public contribution.[24] One of the advantages of this model is that difficulties in one area - for example company turnarounds - do not affect the others. On the other hand there are potential advantages in linking these separate functions in any one project - property and technology both being relevant for say a turnaround. This is where strong horizontal links - stressing first the informal before the formal - are important.

- Finally, the new structure needs to be **pluralistic**. A region should think of setting up a number of development banks since each will develop its own specialisms and culture. It is one of the weaknesses of national schemes for industrial banking that they tend to be unitary, rather than being multiple and specialised, forming a network which gathers in a wider range of associates on the boards, and offers scope for more varied creativities.

Not only is a structure of this kind necessary for the support of small and medium enterprises in any region, but it also provides the foundation for the other distinctive features of the regional agencies, namely their promotion of the local and the integration of the social. Some of these aims - the local and the social - are quite compatible with performing in accordance with private market criteria. Equality policies for women and ethnic minorities, like

training for skills are from one point of view good business practice as well as being important social commitments. But there are tensions between the short-term balance sheet and the longer term social development project. I think there is a case therefore for providing the banks with earmarked funds for political priorities which are not immediately commercial. They can be reported upon and monitored independently, even if they form an inherent part of a normal commercial project.

This is an institutional device. The key point is the outlook of the staff and the agency boards. The creation of such an outlook is an organic not a mechanistic question, for it is nothing less than a matter of social morality - something which in Britain at least has been leached from the small and medium sized sector of private production.

## 2. Industrial Districts, Consortia and Centres for Real Services

The Italian regions and municipalities have had similar aims to those I have been discussing, but have pursued them through different means. They have resolutely refused to get involved directly in production, and instead have concentrated on getting the industrialists themselves to provide the common services. This is the most striking feature of the local economic institutions in the Third Italy, that they are controlled by the users. Regional and local government may have representatives on the Boards of Management, but the control is in the hands of industrialists elected from the participating firms, who also contribute a tranche of the finance.

Take the question of development banking which we have just been discussing. In Modena the key financial institution of this kind is COFIM, a consortia of 500 small and medium sized firms who provide mutual guarantees for working capital loans advanced by local banks to their members. A member wishing to obtain a loan of this kind submits a proposal to both the executive committee of the consortia and a local bank. The committee is made up of local industrialists

with sector representation. The appropriate sectoral representative helps assess the scheme, and if approved the project is forwarded to the bank with a guarantee of 50% of the loan. For the bank the system has two advantages: the project is assessed by those who know the industry and the proposer better than any local bank manager is likely to do; and the proposer is under obligation to his or her peers to repay the loan in order not to have a call made on the guarantee. The results during the 80's have been striking. Whereas the normal default rate on loans of this kind in the Italian banking system is 7.5%, with COFIM the rate if 0.02%. As a result, and because the consortia also acts as a form of trade union for member industrialists vis a vis the bank, the interest rates on consortia loans have been cut 4% below commercial levels. Financial intermediation is thus undertaken by the borrowers themselves.[25]

This is an example of a financial consortia. By the late 1970's there were 79,000 consortia registered in Italy. In addition to the financial ones, many were concerned with marketing both in Italy and overseas. In some cases they provide common showrooms, in others overseas representatives and sources of export market intelligence. The common services may be simple financial functions such as accounting and pay-roll, or collective forms of quality control and raw material purchase. In the case of very small firms these are supplied through industrial associations, the largest of which is the National Confederation of Artisans (the CNA) which has 340,000 member firms, 2,300 offices throughout Italy and 7,000 staff.

During the 1980's a number of regions took this idea of collective overheads further by establishing Centres of Real Services, specialist centres serving particular sectors or group of sectors through strategic research, data banks and information networks, joint CAD systems, overseas marketing information, export promotion, and technological support. Thus the Centro Servizi in Pisa provides a data bank on machinery, markets, clients, and national industrial trends to the footwear and leather industry. Tecnotex in Biella provides professional training, research and technological experimentation. The Comitato Servizio Tendenze Moda in Empoli provides professional training and information on fashion trends to

44 member firms. In Emilia Romagna a regional development agency ERVET, as well as undertaking sectoral research, training and land projects has also established six sectoral service centres and four 'transversal' ones.[26]

In addition to their control by members what is also striking is that these common services are specialised and operated by small staffs. The financial consortia COFIM in Modena which has guaranteed loans worth £17 million during the 1980's has a staff of 3. A clothing sub-contractor's data bank for 276 member firms has a staff of one. One of the most successful of the real service centres, CITER which serves 500 firms in the Carpi district has a staff of 17. If new functions are needed then new institutions are established rather than existing ones diversified. If a particular service is not working, these highly defined institutions are relatively easy to restructure.

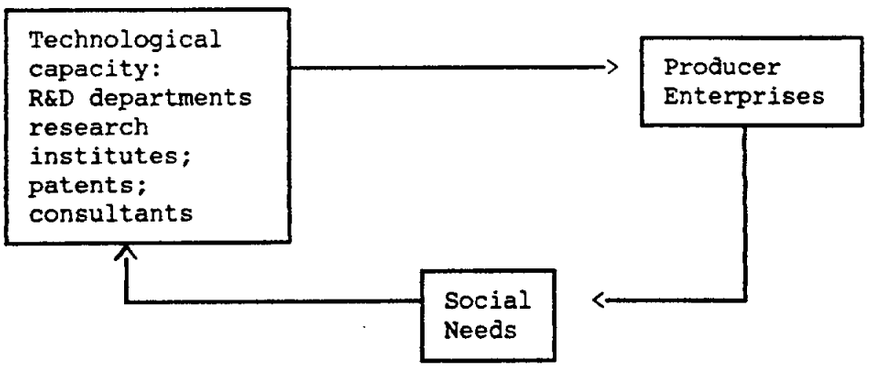
It is not clear how far the success of these collective institutions is dependent on the specific Italian conditions, or the concentration of industry in the industrial districts, the strong sense of locality, and of social consensus which has been one of the broader strategies of the Communist Party in the so called red regions since the second world war. Attempts to translate the common service centres to the clothing sector in Hackney (London) and the West Midlands have not been successful - whether because the local councils rather than the user firms had control, or because of personnel problems is not clear.

On the other hand the success and structure of the Mondragon group of co-operatives suggests that there is considerable scope for the Italian principle of inter-enterprises co-operatives. Mondragon at the end of 1986 had 168 associated co-ops, nearly 20,000 co-operators, and sales of £890 million a year. The key institution in the group is the Caja Laboral Popular - part financial consortia, part development bank, which in addition to financial intermediation, finances and guides the two years' research and start up time of new co-ops, and acts as a more general strategic information centre, as well as administering the Group's social security system.[27]

## 3. Technology Initiatives

The promotion of new technology has been one of the most prevalent forms of local and regional economic intervention during the past decade. The record has been mixed. The French attempt to stimulate technology through the regions has had limited success outside the regions stretching from the Toulouse area through Grenoble and the Rhone Alps to Alsace and Lorraine. Science parks are often little more than industrial estates with trees around them - more successful in establishing the 'status' of an area than in addressing the problems of diffusion and co-operation between firms and research institutions.[28] There are few places in Europe which have matched Silicon Valley in its degree of inter-active co-operation within the Valley.[29]

The most interesting policies have been those which have attempted to intervene in the triad: technological capacity/firms/needs. The conventional circuit between these three is shown in the diagram below:




Needs - both for products and processes - prompt technological innovation which is passed on to firms to produce and satisfy the needs.

Some authorities have started from the technological capacity, and aimed to generate jobs or support existing firms from that capacity. Cumbria County Council for example identified two specialised products developed by British Nuclear Fuels and the defence firm Vickers - advanced robots and anti-glare screens for nuclear submarines - and sought to arrange their adaptation for non nuclear purposes. The London Technology networks set up a product bank, and a number of prototype workshops to encourage innovations and thence products and new enterprises. Amongst the products which emerged were a fifth generation computer, an electric bicycle, and an inorganic compost bin made of recycled glass.[30] Massachussetts have established a specialised quasi public to encourage product development, and have supported specialised research work in the local universities, which it is hoped will provide a central infrastructure and resource base for the new technology.[31] A strategy of this kind needs a venture capital institution to support the development and the manufacture of the resultant products, or alliances with established enterprises seeking new products.

A second, more common, strategy is to start from existing sectors and enterprises and gear a service to their requirements. This may take the form of a general programme to upgrade industry through the encouragement of particular types of technology. SPRI in the Basque country, for example, had such a programme for the promotion of numerical control, of micro electronics, programmable machinery and telematics.[32] Such programmes tend to involve training and jointly funded consultancies, the consultants helping enterprises to identify the broad problem areas (like a general practioner in medicine), then passing over to a specialist in the designated area, and only then moving to the purchase of hardware.

The assumption here is that firms do not know their own interests, and need public help and specialist advice in order to do so. The Steinbeis Foundation in the Baden Wuerttemberg region is based on a similar principle but operated in a somewhat different and more general way. It sees its main function as a go-between linking enterprises with universities and research facilities in the region.

It has a network of 82 local technology transfer centres, 16 branch offices providing technical consultancy services, and a central database of regional technological know-how. A firm wanting help will approach one of the transfer centres and is put in touch with a relevant specialist, whose initial consultation with the firm is funded by the Foundation. Any further work is then paid for by the firm, with the Foundation taking 7% of the fee. In 1989 there were more than 2,000 professors, engineers, technicians and students working through the Foundation and its specialised centres in this way. Some of the work is on the search for new products, some on new processes (the Transfer Centre in Reutlingen for example has become one of the leading specialists in erosion hobbing in Europe), some on R&D (3660 R&D projects were completed in 1988) and some on more general advice and training. The key structure of the organisation is a smal core staff (of 37 in the central office), a skeleton staff of full time employees in the centres and branch offices (234 in 1989) and the 2,000 plus project related technologists and administrators funded by the client firms.[33]

The Emilia Romagna model is a further variant. As we have seen, the sectoral service centres are set up and controlled by the industrialists themselves. They cannot hope to provide the kind of technological capacity that we see in Baden Wuerttemberg: rather they provide technological information - particularly on hardware - and a context for sectoral discussion which encourages the spread of technological know-how between industrialists.[34]

There is controversy on how successful the industrial districts in the Third Italy are in the field of innovation. Some argue that the level of innovation in small Italian firms is considerably below the larger ones, and that the districts - in as much as they do innovate - are more effective in respect of improvements of organisations than of process, and in turn more effective in process than product. The defenders of the industrial districts suggest that the districts' strength is in adaptive innovation - the basis of the success of the Third Italy's engineering districts, and that for light industries it is design rather than technological innovation which is a priority. The important point is that within the districts there is a

collectivity amongst firms as far as the procurement and sharing of technological information is concerned - a function which in more fragmented regions is performed by public advisory agencies and the commercial 'technological' market, if it is performed at all.

A third general approach has been to start from social rather than industrial needs, and to generate new technology and employment around them. This has been primarily a British approach, associated with the technology units in Sheffield City Council, and the Greater London Council. Both were staffed with former trade unionists from Lucas Aerospace - where production for social need had been introduced as an element of collective bargaining around the issue of redundancies during the 1970's. In Sheffield the technology unit was linked in to public housing requirements, and developed and produced a de-humidifier to that end. In London, the idea was developed though five technology networks on a larger scale. One network worked with St. Thomas's Hospital in developing medical expert systems, another developed products to assist people with disabilities - such as a mini gym for wheelchair users. There was a spin-off from the European Visions Centre (jointly established by GLEB, Imperial College and Caplin Cybernetics) in the form of the medical application of robotic vision systems. Best known of all has been the work of GLEB's technology subsidiary in developing human centred technology - that is to say technology which builds on human skill rather than devalues it. They are currently coming towards the end of a £4.5m project to build the world's first human centred robot integrated manufacturing system, a project that now includes Rolls Royce and BICC, as well as Danish and German partners, under the Esprit programme.[35]

This third approach has been very rewarding. If it has a problem it is one of finance. It depends largely on public funding both for initial R&D and for product development and sales. It clearly offers an alternative to defence contracting - where many of the technological skills required are similar - and a means to develop new products and jobs in fields which have had a low priority in the market economy.

The experience of London's technology networks provides a further important lesson. By starting from particular needs they quickly found that new technology as such was only part of the problem, and that new technology had at all times to be integrated within a broader based approach. Thus the Energy network - which specialised in conservation - argued that it was not new technology which was required but advice on and finance for conservation. The technological hardware for conservation was already sophisticated. The problem was take up and affordability. The network thus concentrated on advice - setting up a specialist consultancy and research subsidiary which worked primarily with local authorities - and running a programme of seminars and advisory sessions.

The Transport Technology Network similarly found that it could not divorce technology from the broader question of alternative transport systems. Preferred systems - for example integrated public transport, or heavy lorry bans in cities - needed particular technologies to be developed, for example the design of a new type of public bus. These could in principle have been developed by private firms, but the Network was concerned to use the skills of a maintenance workshop in the London area whose workforce was threatened with redundancy.

In short the London approach provided a warning against 'technological fetishism' - the idea that new technology is the prime road to modernisation. This is always a danger with technology programmes. Baden Wuerttemberg, the Third Italy, and the London and Sheffield divisions have each - in their own way - shown how technological hardware is only a part - often a subordinate part - in any programme of innovation.

The three broad approaches outlined here - technology capacity led, enterprise led, and needs led - are not exclusive. The Steinbeis Foundation stimulates new products and helps finance their production, as well as linking firms to the region's research capacity; GLEB ran open access prototype centres which were linked in to its needs based philosophy. But the three approaches nevertheless do represent distinct strategies, ones that colour the institutions

and working practices involved. What they all point to is the lack of integration which exists between much public research capacity and both public and private production, the need of small and medium enterprises as well as public and voluntary agencies for technological support, and the limitations of the market in providing it. When competition in the market sector depends increasingly on innovative capacity, the role for publicly funded institutions such as we have described is increasingly evident, particularly in the context of upgrading the industrial structure of a particular locality. Central government programmes tend to be less integrated and locally focused than the regional programmes - and it is the need for integration within the local economy which is the main lesson to be drawn from the European experience to date.[36]

## 4. The Cultural Industries and the Environment

One of the novel features of local industrial strategy over the past decade has been the connection made between industrial development and the cultural industries. There has been a long tradition of municipal and regional support for the Arts. There are few cities which do not support their museums, concert halls and individual creative artists. But this has been largely seen as a separate cultural policy, or at most linked in to the encouragement of tourism.

What is new is the recognition of cultural production as a key element of economic policy. In part this is because of the size and rapid growth of these sectors. A recent four volume study found that the annual turnover of the arts in Britain was £10 billion, that they employed half a million people, and that this employment had grown by 25% during the 1980's.[37] A number of the industries are concentrated in the metropolis - or its hinterland - music, book and record publishing, the theatre, design, TV and video, advertising, newspapers - but there are few regions without a significant representation in all these fields and in the educational institutions which go with them.

There are a wide range of policies open to encourage such industries. Stirling Council in Scotland has a full time officer working to attract film locations to the town, an idea that is quite common in the USA. Sheffield have set up a 'cultural industrial district' in an inner city area, with a recording studio, a municipal audio visual centre, and rehearsal rooms.[38] The GLC helped finance newspapers, printers, publishers, and a range of distribution channels which were seen as crucial for the expansion of small independent producers in the record industry, video production and publishing. This was in addition to a massive programme of funding performing arts - which came to be seen as the initial experimental ground for later conversion into manufacturing or - as it was called, the sphere of 'mechanical reproduction'. Both were complementary - the stimulus to popular music through the festivals organised by the GLC, and the encouragement of record distribution for those groups not already taken up by the major companies.

The point of these policies was of course not narrowly industrial. They were also part of a democratic cultural policy which sought to encourage cultural diversity, and to democratise the cultural industries by supporting minority groups and women. In London, the Royal Festival Hall was opened up throughout the day as an arts and quasi community centre; the London Philharmonic played in the Ford factory in Dagenham; a whole range of black and women's groups were funded. In the first half of the 1980's anyone living in London could feel a difference in the cultural life of the capital - in a way which did not neglect the traditional centres of artistic activity, but greatly broadened their range.[39]

During the second half of the 80's there has been a growing recognition of the wider economic consequences of such a policy. Glasgow - one of the worst hit areas of Britain - has been named the European city of culture for 1990 - the result of investment in galleries, theatres, orchestras, ballet, opera, and gardening. In 1982, 700,000 visitors came to Glasgow; by 1988 there were 4.3 million, and there was a substantial impact on employment as a result.[40] Bradford - another old industrial town with high unemployment - has opened a National Museum of Photography. York has

a National Railway Museum; indeed throughout the country there has been an astonishing growth of a modern museum economy, so that even what appear as declining regions are now seeing themselves as potential tourist attractions.

The Italian towns, too, have shown what cultural policy can do to an urban economy. Rome's summer festival for example refilled a city which had emptied during the summer period, and stimulated a whole range of economic activity as a result.

What has also been recognised is the way in which cultural policy is closely linked to land use planning in improving the quality of urban life. City centres are of course a key part of a common culture - and in many areas have been cut into by traffic congestion and by the loss of shops to out of town retail developments. In some towns in Britain the town centres have been privatised - their use subject to surveillance, and closure in the evenings. There can be no more striking comparison than between say Basingstoke in the South East of England, barred and shuttered in the evening, and Lucca, in Italy with its public streets and markets, small shops, and the absence of cars..

The control of out of town shopping, the collective co-ordination of town centres, the provision of cheap city transport, the funding of good street lighting, the mixing of residential and commercial zones, and the support for public spaces - parks, squares, and public libraries and recreation centres - have all come to be seen as part of a broader cultural policy to restore the quality of urban life and the employment that goes with it.[41]

Such policy also emphasises that it should serve its own communities as much as visitors - that indeed uncontrolled tourism can be as much a threat to a town as a solution. This has been a lesson learnt particularly by historic cities. One group of local authorities have come to talk about 'post tourism' - meaning a strategy which encourages visits by friends and relatives, of groups with particular interests, of exchanges, and those with educational concerns.[42]

One conclusion from the approach as outlined is that it is not geared primarily to tourists. Many less developed or de-industrialised regions have turned to tourism and services as their solitary hope - given the fact that manufacturing has so often passed them by. But I hope it is clear that a culturally led policy also stimulates local manufacturing - what starts as a live performance, may then be manufactured and later enjoyed once more as a service in a public library or at home. Furthermore, an open, unpolarised and thriving urban culture has been one of the factors behind the success of industrial districts in manufacturing, and of the new 'knowledge based' industries. A strong cultural and environmental policy still has prime value in itself. But in the present phase of industrialisation it is also an instrument for urban and regional development.

## 5. Sector Strategies and Democratic Planning

The development of the cultural industries work is an example of the sector strategy approach to local economic policy. The argument for such an approach is as follows. Long term strategy has become a key factor in 'the new competition'. Small and medium enterprises lack the time and resources to invest in developing such strategies, and lack the cohesion to put them into practice. Sector strategic planning has been undertaken by some national institutions - MITI in Japan, the Commissariat du Plan in France, or the large industrial banks in West Germany. But it has tended to be centred on large firms and the priorities of the national economy, rather than on the potentialities within particular regions. There has thus been a real gap. Regional authorities, in filling it, have developed types of planning and new forms of planning process of significance not only for their region but for planning at the national level itself.

Once again the Third Italy has been a pioneer. The regional agency in Emilia Romagna, ERVET, has produced a series of substantial sectoral studies on such industries as furniture, wood making machinery, clothing, metal mechanics and so on, as well as studies which start from particular concerns - such as the environment, and

work back from there into their industrial and public sector consequences. We can see this as a version of the needs based approach discussed earlier in respect to technology.

Many of the British Enterprise Boards and Development Agencies have produced sector strategic studies - in the case of the Scottish Development Agency to inform strategies of promotion of particular sectors, in the case of the Enterprise Boards as contexts for particular investments. The Lancashire Enterprise Board for example did a study of the 'filière' of fish production, from the initial trawling, through distribution, to the final consumption in the public and private sectors. This was linked to the Board's turnaround of Fleetwood dock, their diversification into fish products - such as packaged shrimps - and their supply of fish to Lancashire schools from the revitalised Fleetwood catch.

The West Midlands Enterprise Board early on in its life concentrated its strategic work around the foundry industry - in which they had become involved through turnaround interventions. They now provide consultancy services on sectoral analysis, as do SPRI in the Basque country.

In the South East of England, the Greater London Council and its investment agency the Greater London Enterprise Board (GLEB) focussed much of their work on sector strategy. GLEB had a sector strategy division, which developed strategies for industries like furniture, instrument engineering, meat products and food processing, more generally, clothing, printing and the cultural industries, and then sought to follow them through in practice by a mixture of strategic investments, and service support.[43]

In the past four years a group of district councils in the South East - concerned about the impact of de-industrialisation within their towns - has formed a consortium to produce a regional strategy based on twenty sectors, and certain broader development 'needs' such as the environment and effective land use planning.[44]

There have been a number of lessons to be drawn from these examples of regional sector planning. First they have made clear that in each sector there are a number of alternative paths along which development is possible, and that these paths have different implications for issues of local concern - employment, location, the environment, product quality, and the nature of technology and working conditions.

Take the example of furniture. The British strategy has been concentrated on large mass production plants, serving half a dozen mass retailers. The latter have gained effective control of the industry, forced prices down, and been a key factor in the destruction of national furniture production. The strong points of growth in Europe have been in the industrial districts in Italy (such as those in the region of Lake Como, Tuscany and in the Veneto) in Jutland, and in the flexible automated firms in West Germany and parts of Northern Italy. The choice for regions with significant furniture industries is whether to follow the mass production route - with the mechanisation, finance and pool of semi-skilled labour that is entailed - or to pursue the Italian/German route with greater emphasis on customisation, quality, design, skilled labour, inter firm co-operation and a retail structure which does not discourage investment in design and long term upgrading.[45]

This kind of choice can be found in many industries. It is a choice which will not be settled by the market. Neither alternative will necessarily pre-dominate. The outcome will depend on inter-firm and local authority policies, which is why the recognition of these sectoral choices is important.

Second, sector strategy - or rather strategy for a filière or thread running from initial production to final consumption - bypasses the policy debates on manufacturing versus services, or sunrise as against sunset industries. All sunset industries have their areas of sunrise, or as the American economist Abernethy put it, there are no old industries only old processes. A restructured manufacturing industry will require services as an input - software, design, finance, R&D - and will be dependent on services for its output,

marketing, distribution, and customer services. Indeed sectors studies have found an increasing interweaving of manufacturing and distribution, with manufacturers in some parts of Europe becoming little more than sub-contractors to distributors in sectors such as food processing, clothing, footwear, TV, and furnishings.

A sector strategic approach allows industrial policy to follow the grain of the industry rather than the Procustean industrial categories of statistical departments. It highlights key areas for policy intervention - such as distribution or design - which are likely to vary considerably from sector to sector. It also identifies different ways in which the sector interlaces the public economy. In some - such as workwear, or food processing - public authorities are substantial purchasers, and can use their position as purchaser as an instrument for upgrading the industry. In others, it is public education and 'formation' which will be critical, or the provision of concentrated workspace. Italian municipalities have used land use planning powers to restrict the growth of mass retailing and this has had a decisive effect on the fortunes of the industrial districts. Other authorities have intervened through environmental health powers to set standards. The sector strategy in short provides a context not only for the firms and trade unions in the industry, but for the exercise of local authority powers, and for targetted pressure on national government.

What should be stressed is that sector strategies produced by local and regional authorities are not confined to the local and regional economies. They necessarily have to be national and international, as would any such strategy undertaken by a firm. But by being developed within a local context, they have proved to be more finely textured than national sector work, and have been synthesized as national plans by consortia of local authorities. In the UK the most noted examples have been the national plans for the motor industry produced by a group of motor industry related local authorities[46], and a national clothing strategy likewise produced by a group of 16 local authorities working through the Centre for Local Economic

Strategies. Sheffield City Council and the GLC did joint work on the cable industry which became an input to the national debate on cable policy, as they did on the development of Combined Heat and Power.

The local rootedness of the strategic work has also contributed to a rich experience in the process of more democratic planning. This will already be clear from the description of the way Italian industrial support is organised - linked in closely to the industrialists concerned, and to a range of local public bodies. In the UK this has gone further with a range of instruments: public hearings, public enquiries, adult education classes on particular strategies; union involvement in the strategic planning process, including time off for workers from the shopfloor; the setting up of 'popular planning units', with sector specialists working with a range of groups in the industry, publishing newspapers, information packs, videos, and organising conferences and workshops for feedback and discussion.[47]

The results have been to enrich the detail of the plans, and - a point always emphasised in the industrial districts - to build a consensus around the plans.

They have, in short, been remarkably fruitful. Indeed, of all the initiatives taken by municipal authorities in the economic field, the development of such popular sectoral and 'needs based' planning has been one of the most rewarding, applicable to all regions, providing a focus for the synthesis of public and private sector authority, a means of democratic involvement and a rich seam of ideas.

## 6. Property and Planning

Property development and land use planning are long standing ways in which local authorities have tried to influence economic development. The peculiar character of the market for land gives public authorities a clear role in its management, and local authorities in particular since they know - better than more centralised levels of government - the specificities of place. The dependence of the value

of any one property investment on the decisions of others, the tendency for private development to cluster round certain places and uses at the expense of more balanced development, the existence of large economic rents over and above normal rates of return on investment, are among the factors that have brought the local state into the heart of the property market.

Many local authorities have confined their role to designating certain areas for industrial development, and building advanced factories when private developers have been reluctant to do so. This is the bread and butter of economic development departments. I want to look at cases where policy has been taken further, often as part of a more general strategic package.

First there are instances of property being developed as an infrastructure to industrial districts. Italy has been examplary in this respect. The district of Modena for example made 300 hectares of land available between 1955 and 1985 for use as industrial parks. Nearly 600 manufacturing units are sited there, covering some 40% of the area, and since 1973 they have encouraged allocation to consortia of small firms, with a section allocated for metal working, another for wood working, and a 5 hectare area set aside for clothing manufacture to counteract female home working. They have thus been concerned not just with the provision of premises to local industry, but with 'collective efficiency' - providing common services on the estates, and encouraging the clustering of firms in similar branches.[48]

They have also attempted to take the speculative element out of industrial property. The municipality bought the land at agricultural prices and they have passed this advantage on to the industrialists. At the same time they have given priority to firms willing to accept surface rights rather than ownership of the land itself, which means that the future sale price of the property is linked to the original price plus an inflation adjusted cost of the buildings. The 1971 law on industrial parks had specified that a municipality was required to grant surface right leases on at least 50% of land expropriated at agricultural prices, and this has been

central to the stability of industry in the Third Italy. In other countries, a property boom in offices, retail or wholesale distribution has been a major factor in hastening de-industrialisation, and a pressure against long term industrial planning.

What has also been important in Italy is the control of land by the local authority. This has allowed it to select applicants according to the needs of the district. Planning powers have not been enough. In many countries the gains to be had from a change of use, have led to irresistable political pressures to grant particular applications. At the same time the public ownership of land also gives local authorities the rights to the ground rent resulting from the appreciation of land as a result of comprehensive development. They enjoy what has been called 'founder's rent', and can use it for cross subsidy, or for a general subsidy of a whole class of users as in Italy.

There have been other cases of 'industrial district' property schemes in Europe. Motherwell in Scotland developed a Food Park, which brought together distributors, tropical fruit ripeners, and food processors in the same place. Ealing in London has been working on a similar project. Some of the more careful science parks - like those in Sheffield - have the idea of an industrial district written into their objectives, and there are parallels too in more general urban centre developments. La Defence in Paris was an excellent example of the use of strong planning powers to encourage the growth of a modern office district.

In the case of city centres the principle of collective management also applies - but here the need is to ensure different complementary uses, with the local authority playing a similar role to the manager of an out of town shopping development. Covent Garden in London is a particularly successful example which has revitalised a run-down area of the city, through a judicious mixture of renovaton, subsidised rents and an insistence on small scale shops and variety. Once again it was the ownership of land which was a critical support to planning powers.

In the case of Covent Garden some of the key subsidies were to small grocers shops and fishmongers - the type of shop that was needed by local residents, but would not normally have been found in a metropolitan shopping centre. In other cases the subsidy has been for the reclamation of contaminated sites, for the building of new access roads, and for public housing and complementary employment. These are all cases where the land market sits at odds with the needs of an area, and where a municipality's access to 'founders rent' enables it to fund the necessary balance.

There are then two distinct functions we have been discussing. The first is the role of a local authority in co-ordinating the development of an area around a common plan; the second is to finance some of the activities within the plan which could not otherwise have been afforded. There is a third function namely to take the lead in redeveloping an area, and by a public presence encourage others to join in. This is always easier in the run down parts of an otherwise thriving region: it has been more costly in depressed or peripheral regions. What is important again is that the state has enough control of the property rights to ensure that any appreciation of land values goes to the public purse to help fund the initial development and infrastructural expenses.

Much of the above relates to environmental issues. The Modena industrial park makes special provision for automative repairs and 'anti-social' industries. The reclamation of contaminated sites, and reclamation of industrial wasteland contribute to the quality of the urban environment. Some authorities have taken this a step further, by measures to encourage intensive use of existing space in cities and thus ensure a reduced pressue on greenfield sites outside the city. In addition to public redevelopment, they have also used property taxes on empty buildings and unused sites to foster intensive use. Tax, ownership and planning powers are thus all important tools for regional development, but they need to be used as part of a broader package. Property led strategies are rarely sufficient on their own.

## 7. Work, Workers and the Labour Market

There have been two broad strategies in labour market policy a neo-Fordism, which seeks out a low cost, semi-skilled, and weakly organised labour force, and what the French economist Alain Lipietz calls a 'Kalmarian' strategy (named after the Volvo plant) where the emphasis is on higher skills, income security and a measure of autonomy in production. Both imply different institutional regimes at a national level - but the contrast is also to be found in local government labour policy.

In traditional regional policy, one of the attractions of depressed and peripheral regions was that they offered low cost and weakly organised labour reservoirs. This was a factor behind the 'ruralisation' of industry. It was encouraged by the regional labour subsidies in the UK and Italy in the late 60's and 70's, and by a whole range of neo-liberal policies in the 80's.

But the severity of unemployment during the 80's, and the fact that regions like Emilia Romagna and Baden Wuerttemberg remained competitive in spite of high levels of wages, has led many local and regional authorities to follow an alternative path. In the 'red' areas of the Third Italy, the artisans and co-operatives were seen as a way of giving greater autonomy over the work process, while workers in these firms were encouraged to be in unions. The level of unionism in the districts is relatively high, not least because many of the artisans had previously been union militants in the large factories of the North.

On the other hand, the artisan firms are exempted from national labour laws, while there is evidence that the stronger areas like Emilia do sub-contract work to lower cost districts in Umbria and La Marche. It is also the case that one of the strengths of the districts is their so-called 'numerical flexibility' - that is their ability to expand and contract their labour force in tune with the changes in the market, due to a quasi-agricultural ability to call on family or associated labour at busy periods.

There is then an ambiguity (and a controversy) over the wages and conditions of labour in the industrial districts. It is certainly a very different regime to the formalised structures of mass production plants. What we can say is that the emphasis in the districts on the importance of social consensus and - to that end - on curbing the destructive competition of wage cutting, has provided a pressure towards integrative labour policies.[49]

In Italy too, like Baden Wuerttemberg, there has been a clear strategy of investment in skills. In Italy, local and regional governments foster specialist colleges which act both as a centre for training and as a meeting place for artisans who may well teach in the colleges in the evening. In Baden Wuerttemberg there is an extensive educational infrastructure - both for vocational training and for scientific and technical learning. In 1989, the Lander had 270,000 students registered at its vocational schools, 86% of them in industry, trade, small industry and crafts. It also had nearly 200,000 higher education students, (in 9 universities, 23 specialised technical colleges, and 11 Max Planck Institutes), of whom 44,000 were studying engineering, an industry which accounts for over half the manufacturing jobs and a quarter of all jobs in the region.

In Britain - because of the severity of the neo-liberal attack on traditional apprenticeship and vocational training - the response of authorities in the training field has been primarily defensive. Some have tried to keep open skills centres threatened with a loss of government funds. Many have tried to upgrade the government's lower level training schemes, and to top up the incomes of those attending the schemes. The overall squeeze on local government finance has meant that by and large it has been a losing battle - further worsened by the current strategy of privatising the government funded training that remains.

But perhaps because of the severity of the central government's neo-Fordist policies, a number of authorities have promoted a range of more 'Kalmarian' experiments.[50] First they have attacked the growing dualism in the labour market, by using their own direct presence in the labour market, and their purchasing and property holding power to establish wages and conditions that set standards within their local labour markets. They have used these same powers to encourage more equal opportunities for women, ethnic minorities and people with disabilities - notably through an import of the American practice of contract compliance. Many councils also led the way in establishing childcare facilities for working parents - and in adopting more flexible working times to suit those with domestic responsibilities.

The whole issue of working time has emerged as one of the key issues of the labour market, local authorities pressing for equal employment and pension rights for people (mainly women) in part time work, developing safe transport services to cater for those working at night, establishing standards for maternity and paternity leave, and in some cases reducing overtime in order to distribute work hours more equally. Many of these working time and labour market policies have been directly threatened by central government policy, and by the threat to public service employment conditions posed by compulsory competitive tendering (CCT) for local public services. In the past 5 years local authority labour market policy has been increasingly consumed with limiting the impact of CTT on local wages and conditions - a running point of conflict between central and local government.

Within the workplace I have already mentioned the initiatives in human centred technology. This is one part of a more general emphasis on the quality of working life - an issue which includes health and safety at work, and industrial democracy. Councils have funded hazard centres to provide advice on health and safety, they have worked with trade unions on epidemiological studies of the effect on health of new working practices (notably of one person operated buses) and have - through their environmental health departments - undertaken a range of initiatives to improve health at work. Oxford City Council is one of the most advanced in this

respect, and has inter alia negotiated health contracts with a score of major companies by the terms of which the companies provide a range of health checks and facilities to match those supplied by the Council.

In the field of industrial democracy, many councils, large and small, have provided support for co-operatives - and as a result the 1980's in the UK have seen a considerable expansion in the industrial co-operative sector. They have also encouraged other forms of democracy in the workplace, including enterprise planning - in which managements and unions agree on a common corporate strategy - and support for the unions themselves. Some councils and enterprise boards have made it a policy to insist on enterprise planning and unionisation within the companies they support; they have provided financial support for trade union resources centres; and have worked with them in the face of redundancies and factory closures, as well as on area and industrial plans. In doing so, they have been supporting an active supply side unionism - concerned with long term strategy, with a wider community unionism, with the issues of social technology and working time, and of labour market segmentation. The councils involved have had no wish to substitute for the unions, but to provide public support for the wider definitions of collective bargaining.

## 8. Multinationals: Coalitions of Coutervailing Power

One aspect of trade union/local government co-operation deserves a separate mention - that of their dealings with multinationals. Councils, having encouraged small and medium sized enterprises, have not unusually found the employment impact of their work cancelled out by the closure of a single branch plant. In the early 1980's many councils faced with the closure of branch plants within their boundaries have tried to negotiate a reversal of the decision or have supported attempts to keep the plants open under different management. There were a number of cases in France, but for the most part they were not successful, and although there have been instances of success elsewhere in Europe (the management buy-out of the British

Leyland truck plant organised by the West Yorkshire Enterprise Board was one) nevertheless from my experience abandoned branch plants are harder to turn around than 'free standing' enterprises. Production itself may improve, but what the plants lack are the services provided by the head office or other specialised parts of the multiplant firm - marketing, R&D and strong financial systems.

What some authorities in the UK and France have done is to follow an alternative strategy - of forming a coalition with trade unions to bargain about jobs and closures before they take place. One council set up an early warning system staffed by former trade unionists, which alerted relevant trade unions to the possibility of redundancies and closure. This allowed a longer period of negotiation and mobilisation, and proved particularly important when warning was given before a final management decision had been taken.

There have also been examples of joint action by local authorities against a particular multinational on a European basis. The best known case was that of Kodak - where the Val de Marne Council in Paris, the Greater London Council, and the Bologna City Council combined with unions in Kodak plants throughout Europe. The union network - concerned at the run-down of research and development in Europe, and the withdrawal of some European production to the United States - produced a seven point plan for which they sought national and international assistance. The European Commission and the Parliament in Strasbourg gave strong support, but their power was limited, and the two governments that mattered - the UK and France - both refused to help.

The role of the regional and local authorities in this was limited but decisive. They provided meeting space which was seen as neutral as between the different national and political unions within Kodak. They funded a researcher for two years to gather information on Kodak and the photographic sector world wide, and they supplied technical help and facilities in putting together a European newspaper which was published simultaneously in the three main languages of the network.

There have been similar initiatives in support of unions in Ford Europe, Phillips and Unilever.[51] Each started from concerns about particular plants, and broadened out to link the plant level union structures. In each case local authorities provided help in the form of research and some organisation. With companies such as Unilever where the union structure was weak and contact between the plants low, the main emphasis was on a series of seminars, which brought together representatives from different plants to talk about company strategy and alternatives. In strongly organised companies like Ford, the work followed more of a Kodak pattern with an international conference to discuss joint demands on regional workloads and location, as well as a three day public enquiry. The Ford Europe Vice President commented that "we do not accept that such sweeping enquiries into the operations of Ford or any other company are a proper function of a local authority". But with Ford plants playing a critical anchor role in many regional economies, and with trade unions underfunded and beset with political divisions at the official international level, the 80's experience suggests that local authorities have performed what is clearly a necessary function effectively and economically. In each case limited funds and a measure of research and advisory help went a long way - and provided a basis of information, a trade union network, and some agreed ideas on which national government and the Commission itself could then act where regional circumstances demanded.

## 9. Public Services and Parastatals

A second group of large employers whose decisions can have a major effect - positive or negative - on a local economy are centrally run public services and utilities. Together with the local authorities themselves public employment usually accounts for between 1/4 and 1/3 of regional employment, and forms a principal spine for potential development. Yet what has been striking - above all in the UK - is the lack of integration between these services, let alone their orientation to broader local and regional planning. In the UK there is no regional breakdown of the public expenditure estimates; the railways, the post office, the coal board and the airport authorities

take their decisions on primarily financial criteria and increasing portions of the centrally controlled public sector have now been privatised.

One current example which has provoked joint local authority action has been the failure of British Rail to make adequate provision for directing the opportunities presented by the Channel Tunnel to the North of England (in notable contrast to the French, who have used the Tunnel as an opportunity to try and regenerate industry in the Nord Pas de Calais).

Another example which illustrates the alternative impact that public utility strategies can have on depressed areas is given by electricity. There are a range of energy systems in Western Europe. In Denmark and Holland local and regional government plays an important role - as providers of power from small scale generators, as distributors, and as managers of energy conservation programmes. The Danish combined heat and power systems are labour intensive in their construction as is home insulation - both providing jobs for urban areas of need. By way of contrast the centralised electricity systems - notably Britain and France - have pursued a strategy of large scale electricity generation, with nuclear stations sited away from towns, offering limited employment to depressed areas, and with what is now coming to be recognised as significant environmental effects.

Between these two paths there is a clear strategic choice, influenced in Britain and France by the institutional power of the national electricity boards. But there has been a growing questioning of the policy by local authorities in the UK aware of the greater adaptability of the Danish model to regional employment and environmental needs.[52]

Most nationalised industries have structures of consultation with local authorities, though this varies by country, as does the boundary between nationally and regionally run services. In the countries with a tradition of centralised administrative structures, local authorities have pressed for greater power to influence central

government services. In transport, health, energy, telecommunications and postal services local authorities have worked with trade unions and user groups to produce alternative strategies aimed at improving the employment contribution and the quality of service of the industry in question.[53]

In the past central government has been looked towards to provide the basic economic and social infrastructure necessary for a region's development. It was seen as a financial and technical matter - often subject to some form of pork barrel politics. What has now been realised is that there are alternative infrastructural systems - as in the electricity case, that local authorities have an interest in which form is chosen (an interest which may conflict with that of central institutions) and that they also have an interest in the continuing administration of the services. As with the multinationals, local authorities have come to form coalitions of countervailing power, and opened up the issue of the accountability of national public services to localities.

## 10. Consumers and Community Groups

The past twenty years has seen the rapid growth of groups which have argued that their interests are not adequately represented by the traditional tripartite institutions - employers, unions and the central state. They are the new social movements - consumer and environmental groups, women's and minority's organisations, community and international solidarity campaigns.

Some of them have attempted to influence the economy through the market - organising boycotts, or producing information for consumers. But they have increasingly contested and sought to influence private and public industrial policy, and the nature of production itself.

A number of these movements are now having a major effect on the course of particular sectors of the economy. The food industry considers 'the green consumer' to be the major new factor in the 1990's. Chemical companies are having to re-orient their strategies

to try and accommodate the environmental challenge. The women's movement has already had a substantial influence on the labour market. In each case companies have sought to deflect the pressures and build countervailing institutions. But just as they came to accept unions after the rise of organised labour, so the more progressive companies are seeing strong social movements as having a creative role, prompting change, providing ideas, and enforcing standards. They have both enriched and democratised the texture of economic life, not least by representing social needs which are neglected by the market. Sociologists have come to include them within the concept of 'civil society' - whose weakness has been one of the problems of Eastern European economies.

Local authorities have played an active part in funding these groups. They have provided grants to women's employment groups, black employment groups, tenants associations, homeworkers action groups, and community groups in areas of economic decline. They have also encouraged the formation of consumer groups for particular sectors of the economy.

Consumer groups have pressed for new systems of delivery, diversity, quality and cross subsidy to benefit disadvantaged groups and localities. In the UK regional authorities and municipalities have funded groups in transport, health care, broadcasting, and food. The London Food Commission for example was provided with £1 million over 4 years by the GLC, and has had a decisive influence on the British food industry over such issues as additives, food irradiation and food hazards caused by the modern processes of animal husbandry.

The relevance of such bodies for regional policy is as follows. First, they have a growing influence on the leading markets, both in defining particular market segments, and in shaping the nature of demand as a whole. Firms engaging in 'the new competition' must therefore open themselves up to these groups - a point not yet taken on board by Southern Mediterranean food exporters because their consumer movements at home are much weaker.

Second, they play a key part in improving the quality of economic life in an area - a point that I have argued is increasingly important in industrial location.

Third, they have encouraged the development of more self-sufficient local economies a point to which I will turn in a moment.

Good food guides, environmental charters, and jobs from warmth campaigns have not been seen as elements of industrial let alone regional strategy. But as the attention of policy makers switches to the urban and rural life into which economies are embedded - or to the 'industrial atmosphere' as the Italians call it - so these kind of initiatives take on a new significance.

## III

## Implications for Regional Policy in the 1990's

Regional policy has been slow to emerge from the shadow of Fordism. Regional aid is still geared to fixed capital and physical infrastructure. It is still locked in a locational competition for new investment based on concessions and grants. Its primary focus is on financial assistance and the redistribution of cash. Its thinking links development with scale, and open access to markets.

The changes in production and their spatial implications suggest new directions. So do the experiences of local and regional government in the development field. In Brussels - if not in all member states - these directions are being charted: the support for regional agencies; the encouragement of comprehensive regional plans; the experiments with technopoles; the shifting of regional incentives from hardware to software. What can be added to this?

### Ending the competition of incentives

First, the Commission has to find some way of preventing the destructive competition between regions for the footloose Fordist investment. Each time a region in need attracts such an investment through incentives it appears that the policy is working. But as a system it is the companies which gain at the expense of Exchequers. With the coming of the single market the competition between regions will intensify. Only the Commission is in a position to curb it. Incentives could still be provided for targeted regions, but they should be at standard levels and not part of a locational auction.

There is a case, too, for requiring companies that run down branch plants to contribute to the social costs of the closure. Just as mining companies are required to reclaim the landscape they have disturbed, so branch plants should be required to finance social reclamation. Some large firms have already been doing this - Elf Acquitaine in France being a notable example - but such practices

should become mandatory. This would both discourage closures which were contrary to regional policy, and, if they did take place, would contribute to the subsequent restructuring.

Just as the industrial districts in Italy have sought to shift competition away from cost cutting to innovation and quality, so inter-regional competition also needs to shift from quantitative to qualitative factors. Regional policy should be shaped to encourage this.

How should regions seek to compete? It is a question facing every third world country, let alone the depressed and peripheral regions of Europe. One answer has been to see the labour of these regions as the main resource. They are the cheap labour reservoirs of the community - either migrating to the existing centres of industry, or staffing the industries and services that migrate to them. Alain Lipietz has referred to this as 'bloody' Taylorisation and peripheral Fordism.[54] ts long term development potential is ambiguous and fragile. It is a trend that is taking place anyway. This is what I meant when I said that traditional regional policy from the 70's was running with the industrial grain. The challenge for regional policy now is to see whether some more secure and substantive development path is possible, drawing on the new processes of production and the patterns of diffused industrialisation.

Counter cores

One way of looking at the problem is to consider what would be required for the successful establishment of a counter core. If the leading edge of accumulation is now the 'knowledge industries' and if they are formed into core zones - for reasons of labour markets, and productive interdependence - can peripheral regions establish their own zones of attraction? The answer will vary by country. In Britain there can probably be only two, or at the most three core regions. The effective space of the South East's core has got bigger and now extends north to the Midlands and East Anglia and West to the de-industrialised category 2 region of South Wales. Any effective policy of decentralisation must therefore concentrate on establishing

a second core in the North - and this implies that not every traditional region can be a core. At the moment regional policy treats each subordinate region separately, and this only confirms the power of the South. There needs to be a consolidation of the peripheral regions, and a rebalanced regional strategy based upon that.[55]

In continental Europe counter cores have been developing. In West Germany we have seen a slow movement from the North to South, and in France, too, there has been development in the South in spite of the centralised dominance of Paris. What can we learn from this? That climate helps but is not critical, nor are the new technical industries incompatible with older industrial traditions. Boston after all has flourished in spite of the cold and its rustbelt. Rather what is important is a strong research and technical infrastructure, good telecommunications, access to international airports, and a cultural (if not meteorological) climate which will underwrite the technical labour market. National governments directly influence many of these, as well as the location of their own sub centres of political and bureaucratic power. They are in a position to give the 'big push' which would be necessary in a country like the UK if an effective counter core was to be established.

These remarks on counter cores may be unduly coloured by the structure of British production. Like the USA and latter day France, Britain has tended to have a divide between the knowledge industries and manufacturing. F.W. Taylor's separation of conception and execution within the factory, was mirrored in the spatial structure of the economy when conception itself was separated, industrialised and located in the core. In West Germany, in the Third Italy as in Japan, greater importance has been given to the integration of conception and execution. We might then expect the specialist 'software' functions to be closely tied to manufacturing rather than to each other, and for industrial clusters to be more important for the structuring of space than the vertical divisions of function that we find in the UK and US. This is a hypothesis in search of evidence. If it were true then the countries with industrial rather

than functional spatial divisions of labour would be likely to have a number of dispersed core regions rather than the concentrated hierarchy of the UK.

West Germany certainly is more polycentred than Britain. In addition to the different histories of Taylorism in the two countries, three further points may help to explain the contrast. First, engineers and industrial production have had a much lower status in Britain than in Germany, and therefore the tendency for the social layer of technicians to distance themselves from industrial areas has been stronger in the UK. Secondly, West Germany has no economically dominant capital city, and its federal structure decentralises the location of public sector employment. Thirdly, West Germany has not had the high military procurement budget which has been so powerful a factor for regional concentration in Britain, France and the United States.

The conclusion I draw from this is that the relative importance of manufacturing in an economy, the traditions of its work process, the structure of the state, and the nature of the state's spending are all factors which help to explain differences in regional patterns between countries. If we wish to change those patterns, to encourage greater regional equality, then we cannot rely on a uniform system of loans and grants and footloose industry. A wider range of factors need to be taken into account, demanding different kinds of action tailored for each country. European regional policy cannot rely on unitary instruments for the community as a whole.

**Diffused development: from mass production to flexible specialisation**

So much for the deconcentration of core regions. I want now to look at the same issue from the other end - the possibility of autonomous development within a region. Is a region merely a site on which the international division of labour is mapped - whether by the workings of the market or the planning of multinationals is not important - or do regions have a measure of autonomy? This has been the central question of the third world development debate since the 1950's, and the Greens have ensured that it will be part of the European debate

of the 1990's. They have argued that production, consumption, and the disposal of waste should be regionalised - for reasons of ecology as well as democratic control. This stands at odds not only with traditional regional policy, which was aimed directly at influencing the national and international divisions of labour, but also with the globalisation of the economy which is now taking place.

There is a hard and a soft version of the green position. The hard is to take regionalisation literally. In some sectors this already happens. Many services are locally organised and produced. So are some manufacturers - like jobbing printers, or local newspapers, and some producers of building materials. In the language of international economics they are non-regionally traded goods. Can regions hope to expand this self sufficient sector, without major long term cost disadvantages, or at least without such disadvantages outweighing the non-market ecological costs of long distance trade? Can they import substitute without long term protection? This is the question posed by the hard version, and it is posed at a time when the liberalisation of the internal market decreases rather than increases the protection of poor regions.

The soft version is less autarchic. It recognises an international market, but argues that there is scope for a locally centred development which can be competitive on world markets. A localised industry can grow which draws on the distinct resources of a locality, is geared to the specific demands of the locality, and <u>on that basis</u> can gain a competitive foothold in world markets. Localised production is consistent with local and global markets.

Both versions question the validity of the long standing belief in international specialisation and economies of scale. They suggest that economies of scale are now giving way to economies of scope, that product variety is superseding product standardisation, and that local economies are best placed to tailor production to the local environment and to need.

This is the argument of the flexible specialisation strategy which has become so influential in the second half of the 80's. For what it provides is an explanation of why the improbable can happen - that decentralised production can compete with large scale production, that co-operative communities have some advantages over anomic despotisms, and that a work process which links hand and brain may yet outrun a Taylorism which insists on their scientific separation.[56]

Merely to question the necessary superiority of mass production allows us to see the economic landscape of Europe in a different way. What were thought of as anomalous backwaters - regions of smaller scale firms without mass industrial traditions - have now become areas of intense scrutiny. The Third Italy, the Swiss watch industry, Baden Wuerttemberg, Catalonia, and Jutland have all been found to be amongst the most dynamic of European industrial regions. How is this possible?

Some have argued that these districts are not bearers of the future, but throwbacks to the past of sweated labour resuscitated by the crisis of restructuring of the past two decades. Others have suggested that the districts are no more than sub contractors used by those in control of global finance and markets as an effective way of organising innovation and labour.[57] There are districts which support both these views. But equally there are many districts where these readings are insufficient. Italian footwear, or woollen garments have not been successful internationally because of cheap labour. Nor are they all accounted for by Benetton. Indeed part of the explanation for the success of the industrial districts is that they have <u>not</u> been dependent sub contractors to oligopsonistic retail chains. Italy's fragmented retail trade, like Japan's, has been an important factor in their industrial success.

My reading of the industrial districts is that their organisation and innovative capacity does give them a measure of autonomy within the world market. If we read flexible specialisation as referring not to

scale, nor batch size, nor to firm size, but to divisible technology and a form of intra firm and inter firm organisation which stands Taylorism on its head, then we can see the districts are one instance of a more general phenomena - one that can be observed within successful large firms, as much as between them, and which is quite consistent with a flexible automation that provides scale economies when needed. What is central to the new form of organisation, however, is that there be a system which co-ordinates the decentralised units - whether it be a system which is run by an assembler, a retailer, a municipality or by the associated producers themselves. The world market demands this system, but within it producers and localities have wide scope.

It is significant that it is local and regional authorities which have shown particular interest in strategies of flexible specialisation, and which - as we noted earlier - have played a central role in those districts which have been successful. What they have discovered through their practice is that there is an alternative industrial strategy to mass production, one which does not leave localities dependent on head office decisions taken elsewhere. If competitivity is no longer determined solely by labour costs, nor by large scale capital investment, but involves those modern watchwords - design, quality, and prompt delivery - and if these in turn are dependent on effective micro organisations and 'industrial atmosphere' - then it is clear that every region and locality has much to play for. Industrial location is much less narrowly determined than a view from on high would suggest.

There is then both a historical case to be made for the soft green view, and a theoretical explanation for its possibility. Local and regional authorities have been steered towards this strategy during the 80's because of the limitations of the footloose alternative, and, in some cases, the failures of turnarounds informed by a Fordist philosophy.

The resulting experiments should also give heart to the harder greens, for in some sectors it is clear that flexible specialisation as defined above does offer more localised economies. I have already

given the example of energy. Another sector is food. Here the trend towards concentrated mass production, mass distribution, mass retailing and mass catering has been challenged by a range of flexible specialisation initiatives. The fastest growing food sectors in the UK have been ethnic minority and organic foods, both specialised segments formerly ignored by the mass retailers. Distributors of organic foods have become shopwindows to a local food economy, as have local restaurants and hotels which have prospered relative to the mass chains. As the former editor of the British Good Food Guide has said, catering is one area where the small producer will always be able to compete against the chains (citing the history of French catering in support). Some local authorities have been stimulating this alternative regional food economy by establishing quality certificates for restaurants, publicising locally controlled restaurants and encouraging supermarkets to make room for regional produce. As in other fields of culture, there is now clear evidence of resistance to the spatial standardisation of products, with consequent implications for regional employment.

What marks out a 'flex spec' industrial policy is that - unlike Fordist mass production - it does not homogenise space. A Ford factory is built on the same plan, with the same specifications wherever it is in the world. A flex spec factory is adapted to local materials and the capabilities of local producers. This means that it cannot be reduced to a policy of industrial districts. What is clear from those districts which have succeeded is that their success is highly dependent on their histories. In some areas - in Northern Germany for example, or in the former industrial heartlands of the UK, the economic traditions are utterly different from those of the districts. Other 'flex spec' approaches are required to recreate a thriving economy. Embedded branch plants committed to building up a long term network of local suppliers may be one way. A public sector 'anchor' activity would be another. A third would be to start from the industrial and cultural strengths of a region - like the flex spec factory constructor. No place need be written off, nor abandoned to what Gorz calls the new 'servile' industries.

We can now link back in the discussion of industrial strategy with that of the new knowledge sectors. In both cases, the geography of Europe suggests that the location of accumulation is more open than might at first be thought. This is less because of some putative spatial freedom determined by the advent of advanced telecommunication technology, than by the alternative ways in which productive systems can be organised. In some instances the key links of a whole filière of production can be made locally. This is the case of the districts like Prato, which have their own designers as well as producers, their own marketing 'impanatori' as well as their technological consultants. In other instances the system will be organised globally, with some parts such as finance and advertising hooked into their own industrial districts specialising for a world market. Research on Silicon Valley suggests that producers there are part of both such networks. What matters for local economies is that within such 'chaotic networks', they have a way in.

I have spent some time discussing 'diffused industrialisation' since in many ways it is the basis of the new regionalism. But we should recognise its limits as well as its possibilities. Unless we see it is first and foremost a question of new types of productive system and not just a matter of industrial districts, then the potential itself may be difficult to realise. This implies that national and international public policy may be as important as local policy. Certainly national legislation has been critical to the success of the Italian industrial districts. But it also means that the local and regional governments become as it were the orchestrators of local development within frameworks and resources coming in part from above.

European regional policy then needs to be concerned with the community wide frameworks which would encourage diffused development. This would include the action I have already discussed in relation to Fordist companies, particularly that which makes them more obliged and responsive to the regions within which they are placed. It would include infrastructural policy on telecommunications and the European airport system. It would entail a reconsideration of taxation - not least in relation to the environmental costs of transport, and the

cultural and economic costs of mass marketing. It would also involve a readiness to fund cultural spending as part of regional economic policy, recognising that the environment of a region, the layout of its towns, the ease of its transport, and the quality of its life are now key factors in economic development. What the French regulation school would call 'the mode of reproduction' has assumed a new importance in the circuit of economic life.

**New Regional institutions**

The above measures are about context, infrastructure and finance. But what is also needed for diffused development are new quasi public 'pioneers', initiators, advisers and guarantors of the necessary 'systems'. One promising group of institutions to play this role are the development banks. They are relatively new, and stand to be as important an administrative innovation in the late 20th century, as ministerial departments were in the 19th century, and as public corporations have become over the past half century.

There are three ingredients necessary for the success of the banks as a system of institutions. The first is pluralism, the more the better. As with private firms, it will be impossible to predict which will succeed and which fail. There must be ease of entry and ease of exit. There might be a number of such banks in Wallonia for example rather than a single agency. Their performance should be judged firstly on their development performance, their financial results being a guide but not a determining criterion. They should be free to expand outside their initial area where industrial logic dictates. Thus the electric bicycle developed by GLEB in London was not manufactured in London because it required an initial production period in a Bologna factory which it was judged a London authority could not finance. The same geographical restrictions have vitiated the work of national developments agencies, which makes no sense in an era of globalised circuits.

Secondly, I would encourage at least some agencies to specialise. There should for example be green enterprise boards and a range of sectoral development banks concerned say with the cultural

industries, with clothing, or with food. The point here is that the banks should be seen not primarily as lenders of money - there are more than enough private banks to do this - but more as centres of specialist information and advice. They should have a strategic capacity, and an intelligence of opportunities. They need to have the skills to link together parts of a package - property, training, technology and finance. In these areas they can act (as they have acted) as specialist intermediaries, working in co-operation with the wider development banking network, but without fear of overlap. I am proposing therefore a mosaic of these banks, part funded by the Community, and linked together in geographical and sectoral networks to strengthen their mediating power.

Their success, however, will depend on a third thing, which should be established as a matter of priority. That is a network of specialised educational institutions for the preparation of staff to work in the development banks. It was the absence of such an institution which has been a limitation to the enterprise board movement in Britain. While one such could be set up in Britain, it would be preferable to have a number of them throughout the community. For the culture required of the new staff should be both local and global, it should be infused with the richness of variation which is evident in the development agencies that already exist. The courses should mix college based study with 'stages' in existing banks - both private and public - and in productive enterprises. The same care with which the new civil service education was prepared in 19th century Europe is required for these public development agencies of our time. But there is a difference. Access to the colleges should be open to those who will continue to work outside the agencies - in production, or in those institutions of 'civil society' of which I spoke earlier. The skills of productive development cannot be limited to an elite if I am right about the necessary democratisation of production.

## Regional economic systems, common cultures and the role of the state

The development banks are one part of a more general restructuring of public economic administration. In the earlier periods of industrialisation, the state's main functions were the establishment of a national economy with all that went with it - a national money, a national labour market, a protected home market, rationalised utilities, a national defence production complex and so on. In late twentieth century Europe, this has changed. These functions are shifting to the European level - and at the same time, the changes in the productive and spatial economies are requiring new initiatives from the state. I have already described many of them - in the fields of culture, the environment, the representation of need and of particular interests, of regional economies and so on. The state's role in these fields is not new. What is new is their economic and political significance.

What globalisation and the expansion of Fordism has done is to fracture social institutions and localities. Relating to society as it does by the market, it has eroded the social forms in which it was initially embedded. It has transformed the structure of the household, of town centres and localities, of working life and the sphere of consumption, and of the environment in which we live. This has been the project of modernity - the destruction of the old in order to create the new - but the new in this case faces a whole series of social, spatial and environmental crises, because the drive of the commodity economy has got out of control. Its response has been to try and remake the social through the management of culture. Industrial relations, organisational science, marketing, advertising and the symbolic worlds of politics and the state, are all part of what I earlier referred to as the emergence of culture as an independent productive force. But as organised by centralised states and corporations, they have provided a thin cement for the late twentieth century's fragmented 'post-modern' condition. Electronic communities have proved weak substitutes for human ones.

This crisis between the market and the society in which it is enclosed is reflected in the heart of the productive economy which we have been discussing. Large private organisations are trying to recreate the social within themselves. They are developing new forms of corporate organisation - ones which involve decentralisation, the increase of bounded autonomy to direct production units, corporate welfarism and explicit company cultures. These new forms are a response to the problems of innovation and productivity within Taylorised organisations. The success of the industrial districts - which have thrived in those areas where a common culture and community still exists - itself testifies to the significance of these factors.

The public task seen against this backdrop is two-fold. First, it is to create conditions where the sense of a common culture and of social autonomy can thrive. Second, as far as localities are concerned, they have the task of co-ordinating the spatial economies as systems. At the moment, the key parts of any local economy are, for the most part, directly organised by vertical hierarchies with a national or international geographical spread. This is as true of a hospital as it is of a branch plant, or trade union branch. Between these vertical systems the co-ordination is weak. Thus the local economy as a <u>system</u> lacks the organisational co-ordination of the vertial institutions within it. This is particularly evident in the state, and is reflected in the continuing failure to develop fully integrated transport systems, to link planning and transport, to marry health care with a preventative strategy within work as well as without, to open up universities to other parts of the locality, to integrate social security systems with localised production needs. But it also applies to the co-ordination between firms, when those firms are themselves small and lack the systemic unity and division of labour of the large.

The state's function then is, in part, healer, social gardener, animator, decocratiser, regulator and co-ordinator. It also has an entrepreneurial function within the economy - which is where the development banks come in. Unlike the macro-management of a national economy, these functions cannot be carried out by a centralised

state. The public sector must learn some lessons from the private. For all the functions require some form of production - and it is one of the principles of modern organisation to push responsibility down to the producers.[58] Some decentralisation will be functional - but much will involve localities, and it is a central argument of this paper that local and regional government is a key economic institution in the era of globalisation. As will be clear from the earlier discussion, I define economic widely - since it is the wide definition that is necessary for any project of regional economic development. The kind of initiatives outlined in part II indicate both the scope of the new economics and the place that local government plays within it.

## Discretionary finance and discretionary powers

This is not the place to discuss the detailed programmes. What is important, however, is to have some sense of the new structures that could best develop the programmes and deliver them. My own view is that we should get away from the Weberian model of public administration - where all levels of the state are clearly structured and assigned their detailed responsibilities. What is needed is a more flexible, fractal and discretionary structure, which can take initiatives and be judged on the balance of success and failure and not on conformity to input budgets.

In the case of regional policy, this would mean that the Commission further develops the role it is now playing as a provider of discretionary funds on the basis of plans. It should widen the scope of these funds along the lines discussed, and provide support and 'animation' for the development of the plans and the administration of projects. This is why central educational institutions and the financing of networks are important. Those countries and regions which do not follow this path - on their head be it. Development cannot be forced from the centre, as used to be assumed in development theory. Rather the centre can only encourage those who share similar perspectives.

The funds, moreover, should be open to any level. If a national authority does not wish to make use of them, then a municipality might, or the regional government. Public sector creativity can come at any level - the task of the structure is to ensure that such creativity is funded. Similar principles apply at each level of the state. Regional governments should also set up discretionary funds. They should encourage regional quasi publics in areas such as training, or city centre management, in a manner similar to development banks. And the democratic accountability of such a systematised, yet decentralised public sector should be secured not only through traditional systems of elections and public accounts, but by the practices of democratic planning and the underwriting of the new social movements that were described above.

New types of regional policy thus need new types of state. Local and regional governments in Europe have indicated the outlines of both. What I have wanted to show is the richness of the alternatives - from counter cores, to industrial districts, technology mediation, municipal enterprise, popular planning, culture-led strategies, countervailing coalitions, and so on. There are many others I haven't mentioned - towns cards, full employment zones, educational funds as regional incentives, or municipal consumer committees.

These experiments confirm the dynamism of even the poorest localities. They remind us that many national economic and social policies are but generalisations of schemes first pioneered locally. Given the averaging that takes place with systems of representative government, particular localities - as lower levels of representation will face new problems more severely than the average, and have governments which will first reflect the new social forces. This is what underlies the local economic achievements of the 80's. In moving away from Fordist regional policy - the task is not to choose between them, but to further extend the structures which will encourage the new regionalism to thrive. For on this depends a more effective response not just to regional inequality, but to the economic and social crisis of modernity itself.

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# Appendix 1

# Employment

The number of people unemployed in Sheffield now totals close on 60,000 when account is taken of those who are unemployed but are not registered. This appalling waste of human resources is totally unacceptable. People want to work and indeed have a right to work. Moreover there is a great deal of work that needs to be done. Within the local community there are many unmet needs—houses lacking basic amenities, insufficient day-care centres, cheaper forms of transport and community and recreational facilities.

An alternative strategy that brings together unmet needs, physical and technical capacity and people's right to work requires co-ordination at a national level. However a socialist authority like Sheffield can't afford to await the return of a Labour Government. Consequently the Employment Department has and will continue to develop its own alternative strategy for the benefit of Sheffield people.

Throughout 1984/5 the Council's policy will reflect a new integrated approach to the problems of defending jobs, creating jobs and responding to unemployment in the City.

**The defence of employment in the City The Council will**

- Continue with campaigns to defend jobs especially where these are ruthlessly axed by the present re-structuring of capital on a world scale.
- Work closely with the trade unions in these industries providing them with information, research and resources as a means of mobilising their efforts to fight for their jobs.
- Co-ordinate the local struggles against the privatisation of the public sector service industries.
- Use the Council's considerable capital expenditure programme as a means of affecting levels and conditions of employment in the building industry.
- Make the department's extensive knowledge of local industries more readily accessible to those who need it. A shop front will be found for this purpose.

**Direct labour The Council will**

- Continue their commitment to Direct Labour because in comparison with private contractors it provides better quality work, lower charges, adequate public accountability and decent employment conditions for its workers.
- Further improve the quality of work by making it possible for workers and users to plan and develop services together.

**Competition The Council will**

- Fight for changes in the current law to release councils from enforced competitive tendering which is wasteful and costly, inflexible and bureaucratic and tends to put cheapness before quality of work.
- Take all possible steps when competitive tendering is used to ensure that it does not put Direct Labour at an unfair disadvantage.
- Strictly enforce the Council's Standing Orders which lay down clear conditions for private contractors concerning methods and quality of work, wage rates and working conditions, health and safety, training, equal opportunities of employment and workers' rights to union membership.
- Monitor the cost of private contractors working for the Council and ensure that all extra costs involved in this process are widely known.
- Establish a Code of Practice for the operation of contracts for compliance with Standing Orders and for qualification for being on the Council's Approved List of Contractors. The Code of Practice will ensure that the Building Unions are informed of every private contractor's job, its value, start date and location.

**A united strategy The Council will**

- Recognise that strategies to defend Direct Labour will depend ultimately on the strength of the workforce to defend itself. Union and Shop Steward Structures can be supported in the following ways:

(i) Give them the time to organise and communicate with their membership and recognise the value of Trade Union co-operation in the communication of Council policy to the workforce.





(ii) Continue to work closely with Shop Stewards on the Joint Works Group together with tenants in discussing all aspects of policy or future developments which could affect the Departments or Direct Labour in the council in general.

(iii) Ensure that they are involved in discussions on crucial tendering matters and are notified where private contractors are working within the Department.

(iv) Give time for paid educational leave for Shop Stewards courses.

**Employment creation The Council will**

- Continue to recognise the crucial role Council activities play in stimulating the local economy by:

(i) Maintaining and, where possible, expanding the number of people that are directly employed by the Council.

(ii) Ensuring that its £80 million annual expenditure on goods and services is channelled into useful employment in the city. At present 25 per cent of all jobs in the City depend directly or indirectly on the Council's activities.

- Explore new areas which have not been part of Council employment in the past where there is a growing need for interest and expansion. A planned approach to product development using new technological research in conjunction with new ventures can be stimulated to meet those needs.
- Develop a new approach in job creation whereby a continuing interest is maintained in enterprises given initial assistance. The Department will develop new products, give legal assistance, advice on marketing and provide additional second stage investment in the form of satisfactory working capital arrangements.
- Stimulate the development of new products and processes using new technology to put existing Sheffield industry on a firm path for the future.
- Develop positive programmes to ensure that the new technology preserves and enhances employment and skills and does not lead to their wasteful destruction.
- Work closely with all areas of the local authority and in particular develop strong links with the Polytechnic in order to tap their expertise in the fields of business and marketing.
- Continue to support, and further the close working relationship with, the co-operatives that have been successfully developed in the City.
- Make available information on concessionary rent schemes, grants and loans and rate concessions and continue to use the international links with twinned cities to establish trade links where possible.

**Improve the quality of employment**

The Council aims to do far more than defend existing jobs and contribute to the creation of new jobs. It is committed to the improvement of the quality of employment of its employees and those of employees in the private sector wherever the Council can exercise a direct influence.

**Equal opportunities for women**
**The Council will**

- Improve the conditions of part-time workers of whom women comprise by far the greatest proportion.
- Develop a programme of positive action for women employees to increase the numbers of women in senior posts. The effects of past and present discrimination and structural barriers to equal participation in employment will need to be broken down.
- Help to reduce domestic responsibilities by providing more childcare and support services for the care of the sick and the elderly.
- Develop measures to identify and prevent sexual harassment at work.
- Develop voluntary job sharing agreements.

**Equal opportunities for minority ethnic groups**
**The Council will**

- Utilise the ethnic record keeping system as a means of monitoring the Council's equal opportunities policies. Current employment practices can be monitored in the following ways:

(i) ensuring that entry qualifications demanded for jobs are appropriate for the job in question.

(ii) advertising jobs in the minority ethnic press and wording adverts to encourage black applicants to apply.

(iii) introduce objective selection procedures free from racial and cultural bias.

(iv) introduce racism awareness training for all employees but crucially for staff involved in interviewing and selection.

- Strengthen the Careers Service Ethnic Minorities Communities Team in recognition of the disproportionate numbers of unemployed black people.
- Promote equal opportunities in employment, training and business development throughout the City as a whole. A special officer has been appointed to develop this function.

**Equal opportunities for the disabled**

A programme of positive action will be initiated in close collaboration with Family and Community Services to enable disabled people to have equal access to jobs.

**The Council will**

- Train disabled people to provide them with the skills required for available jobs.
- Provide aids, to open up the number of possible job opportunities.
- Adapt premises to make them suitable for disabled people to get into and to work in.
- Restructure jobs, where necessary, to allow them to be taken up by the disabled.
- Use the YTS in a flexible way to obtain maximum opportunities for young disabled people.

**Employment and the Local Authority**
**The Council will**

- Work towards the introduction of 'single status' in relation to conditions of employment and industrial relations procedures.
- Identify workers who fall into the definition of low pay and move towards the implementation of a minimum wage negotiation with the trade unions.



- Ensure that the hours and earnings of low paid part-time workers are not reduced.
- Open up opportunities for workers to develop talents and abilities at present blocked by their employment position. Educational and training opportunities will be widened for low paid workers.
- Maintain its commitment to the no-redundancy policy.
- Increase employee participation through a series of joint committees and by supporting the development of effective joint shop steward organisations.

**Employment standards in the City**
**The Council will**

- Continue to use the Contracts Working Party to control standards and employment conditions in the private sector where the Council has contracted out work.
- Form "Planning and Employment Agreements" whenever grants, loans or guarantees are offered to enterprises.
- Encourage the development of trade unions in all organisations and companies that deal with the Council.

**Support for the unemployed**
**The Council will**

- Ensure that policies and initiatives are developed as a joint partnership between Council departments, trade unions and other outside organisations to provide more permanent funding and resources for the unemployed, wageless and low-paid. Substantial efforts will be made to co-ordinate the many ad hoc initiatives currently underway in Sheffield.
- Recognise that there are different groupings within the overall unemployed, all of which present specific problems and need special understanding and initiatives.
- Recognise the leisure, recreational and educational needs of the unemployed by providing support for outside organisations and in particular for the Sheffield Centre Against Unemployment.
- Counter the widely-promoted image of the unemployed as feckless and workshy with a programme of publicity and information which challenges such a view.
- Ensure that the Authority's internal practice and its everyday relationship to the wageless complement these policies. In particular, Council staff will be trained to develop a sympathetic understanding towards members of the public who are unemployed.

# Industrial Location in Europe

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# SOME FACTORS AFFECTING THE LOCATION OF INDUSTRY IN THE COMING DECADE

A Report to the Commission of the European Communties (DG III)

by the agenor Research Unit Asbl

Brussels, June 1990

CONTENTS

PREFACE

This report examines some of the factors that will influence decisions on the location of industrial activity in Europe in the coming years.

It was written for the Directorate-General for Industrial Affairs and Internal Market of the Commission of the European Communities.

It complements other research being carried out by the agenor Research Unit Asbl., in the framework of its European Research Project on Autonomy, and centred on the potential of regional units for successfully tackling issues of employment and regional development.

The European Communities' plans to achieve a single market by the end of 1992, and the possible extension of this to other European countries, will in themselves exert a powerful influence on siting decisions by bringing fundamental changes in the dimension in which they are taken.

But they will be one influence among many. This report examines a series of factors, which will exert their influence in varying ways and in differing time-scales: new information and telecommunications technologies; regional policies; developments in the transport infrastructure; environmental considerations; changing patterns of energy supply; and bio-engineering.

There are other factors at work which it was not possible to include in the scope of this report: for instance, wage levels, structures and differentials, and the strength and policies of trade unions; educational standards levels; housing; and land values.

It is the sum of individual decisions on where to locate economic activity that shapes the pattern of regional development or decline. The report therefore explores tentatively the likely impact, in terms of concentration or de-centralisation, of the factors examined.

The report is based in part on a series of international working sessions with researchers from different countries working in the fields touched upon, backed up by recourse to the available literature. The resources available did not make possible on-the-spot quantitative research. The final text was drawn up by the staff of the agenor Research Unit.

A SUMMARY OF KEY POINTS

1. In a context of intense competition, rendered more acute by the creation of the European single market, the over-riding motivation behind decisions on the location of economic activity will be profit maximalisation: this will reinforce the trend towards concentration

2. "1992" will give a boost to natural regions that had been split by economic frontiers, and to areas previously peripheral which find themselves strategically placed. Transport developments - extra-fast trains, and a series of major bridge or tunnel schemes - will favour certain regions.

3. Firms applying new information and telecommunications technologies to be able to switch production in response to demand (flexible specialisation) will seek partners and suppliers in regions with a tradition of dynamism and flexibility.

4. A central core area of concentrated economic activity could emerge, running south from London, via Benelux and Germany, to northern Italy, with a branch westward as far as Catalunya

5. Experience gained in the 80s reveals the potential of measures taken at the regional/ municipal level to create a fertile soil for the development of new industrial initiatives. This could enable regions to become attractive for location.

6. Development of renewable energy sources, which tend to be located on the periphery - Atlantic sea-board and southern coasts and islands - could provide a low-cost-energy basis for development.

7. The prospects for rural areas - peripheral and internal - are negative. Those with climatic appeal may attract people whom information and telecommunications developments allow to work at home: but this development is economically marginal

8. Environmental considerations will have a growing impact on industry, but in so far as norms are the same everywhere, are not likely to be factor influencing siting.

9. Other factors, not dealt with here - wage differentials, educational levels, land prices....- will also count.

10. National and Community authorities will have the chance to boost or restrain the move towards economic concentration, and can choose whether or not to encourage regions seeking a stable locally-based economy.

## INTRODUCTION

The coming decade is going to see major changes in the organisation and geographical distribution of economic activity throughout Europe. Against the background of unrelenting world-level competition and ever-increasing concentration of ownership and control, a wide range of factors will be inter-acting, each with its impact on the location of activity.

Decisions about location of industry - be it creating capacity at a new site or shifting production from one plant to another within the firm - constitute a nodal point, since the sum of individual decisions determines what changes occur in the pattern of distribution.

The most fundamental and far-reaching of the factors at work is the steady spread of the application of new information and telecommunications technologies at all stages of the production cycle. It is a process destined to extend to the entire economy, with repercussions for the social and political structures of society. Firms using the potential opened up by the new technologies for responding to complex and changing demands patterns will be influenced in their choices of location by social and economic factors, such as the existence of regional traditions of cooperation and adaptability.

In parallel, the creation of a single market covering the present Community of Twelve, and its probably extension to the EFTA countries (and beyond) will significantly change the prospects of a number of regionsm, some which were divided or peripheral and find themselves in an improved position, whilst the relative disadvantages suffered by others actually increase.

Experience gained in many parts of Europe over the past decade has shown that a broad variety of initiatives taken at the regional or municipal level can help to create a fertile soil for the growth of locally-based economic activities (2).

Such an approach can potentially, and in the medium term, render the areas concerned attractive and enlist the involvement of factors previously working only in favour of areas of well-established economic concentration.

Nevertheless, this could leave intact the problems of deserted rural areas, particularly on the periphery. The question remains open whether any of the factors under examination can provide a basis for reversing their decline, whether through the emergence of new activities or through the location of activities linked by information and communications technology to dynam-iegions.

Several factors can be expected to have an increased impact on the behaviour of firms, but not necessarily on their options about location of activity. One is concern for the environment. There will be a manifold increase in the pressure on industry, resulting from the interplay of increased levels of information and awareness, growing involvement of both civil and political society ( citizen action, political parties ), and stricter legislation. Already there are signs of a fundamental change in the attitude of industry to its responsibility for the environmental impact of its activities.

In the medium term, developments in relation to energy sources can have a major impact. The development of the potential for indigenous renewable energy sources can result in changes in the patterns of energy supply and costs.

In the case of transport, the impact on location is easier to identify, with ultra-fast transport networks increasing the attraction of core areas, and major civil engineering schemes (tunnels, bridges) re-shaping the relationship of core and peripheral regions.

Mention must also be made of such factors as bio-engineering, with its potential for reducing dependence on local raw materials; and of the cultural industries which have a potential for working against the initially prevailing trends of decline and concentration.

Chapter 1

# DECISION-MAKING ABOUT PLANT LOCATION

The overall aim of this study is to examine and assess some key factors influencing decisions about plant location. Since individual decisions have a cumulative effect which helps to determine the geographical distribution of economic activity, any indications that may emerge can be useful in forecasting shifts in the balance between regions.

The circumstances in which decisions are made can vary greatly. The decisions to be taken range from selecting the site for an automobile plant, intended to supply a major share of the European market, to the choice whether a new do-it-yourself store be opened in the newly-created pedestrian area in the centre of a small town, or located near a supermarket on an industrial estate, accessible only by car, on the outskirts of a medium-sized town.

Location decisions are not necessarily about the building or opening of a new factory, warehouse or offices; they also cover decisions to shift production from one plant to another, as a function of costs or profit margins, within a firm or within a conglomerate.

The "firm" is becoming increasingly an organisational concept, which no longer implies unity of place. Thanks to information and telecommunications technologies (from instant recovery and transmission of data to satellite-carried audio-visual conference) and the potential for rapid travel (extra-fast rail, private air travel), it is increasingly possible to locate top management, production units and clerical services apart, each in optimal conditions.

Top management of big companies or groups will continue to cluster in major financial centres and in centres of government.But this leaves the firm free to locate production as a function of strict cost criteria.The newspaper world shows many examples of this trend: editorial functions must remain near political and economic capitals, but with instant transmission of texts, sub-editing and lay-out can take place at out of city sites, and actual printing can take place at several different locations, in different regions or even different countries to facilitate rapid distribution to widely dispersed markets (cf Herald Tribune, produced on both sides of the Atlantic; The Guardian, printed in London, Manchester and Frankfurt, the Financial Times printed in the United Kingdom and in Frankfurt).

There has been a tendency for multinational corporations using English as their working language, to re-locate office work involving the servicing of computers in the south-east of the

United Kingdom, where there are reserves of native English-speakers with the appropriate qualifications - a solution less costly and more efficient than training (and paying) staff to work in a second language.

Industry had long since tended to shrug off the constraints about mobility associated with regional ties : family attachment to a particular area, social or other ties with the local community, dependence on a local labour force with particular skills and traditions. The reduction in the relative weight of wage costs and the replacement of many skilled or semi-skilled jobs by robots have removed the main reasons for sticking to a given site.

With the internationalisation of capital, and the concentration of ownership, decisions about location of production tend increasingly to be centralised, and taken at the level where effective financial control is wielded. Computer technology makes it possible for decisions to be based on analysis of a maximum of relevant data, and with the criteria of profit maximalisation strictly applied.

Despite the concentration of decision-making, there remain at every level imponderable factors which are peculiar to each decision. The location of a major new automobile plant may turn on negotiations with the relevant trade unions at national or local level and their acceptance of profit-sharing formulas.

Chapter 2

## THE CONTEXT : INTENSIVE INTERNATIONAL COMPETITION

The context in which decisions on the location of economic activities are taken is one of unrelenting competitive pressure at the world level. Many factors have contributed to this. Thus:

- there is a race for the application of new technologies.

*"During the past decade of economic crisis investment activity remained at a modest level, whilst technological development, if anything, speeded up. The result is a back-log of new production technologies waiting to be applied".(2)*

There is a competitive bonus for firms which manage to introduce these technologies first, and in order to build up the resources needed for this investment, short-term cost-saving of all kinds is applied.

- new information and telecommunications technologies have created what amounts to a planetary stock exchange, functioning round the clock and with something approaching transparency. There is an on-going battle for survival against predators seeking investments that will yield rapid short-term profits.

- growing interpenetration of markets at the world level, brought about by the same new communications technologies, bring so many factors into play that the market for a given product becomes unpredictable. This leads inevitably to over-capacity, and to ever-fiercer competition, especially in the field of standardised mass-production. On the markets of the developed countries, competition becomes less and less a matter of cost and price, and increasingly turns on quality differences and the ability to meet differentiated demand. This explains the struggle to remain in the forefront of technological progress and its application.

- new technologies are breaking down the borderlines between industrial sectors, and corporations have sought to diversify by buying into sectors with a related technical base, where they can hope to achieve additional capital accumulation through a broader industrial base.

Thus

*"the development of digital technology, satellite communications glass-fibre transmission have heralded the arrival of new enterprises on the telecommunications market. Computer companies like IBM are beginning to build switching stations and offer "intelligent" terminals to replace telephones and telexes. Office machine manufacturers, unwilling to limit themselves to telefaxes, are elbowing their way into the same market...*

*"Biotechnology is also giving rise to similar developments. Food producers with experience in fermentation technology are moving into the pharmaceutical sector, and pharmaceutical companies are moving into agro-chemicals..." (3)*

This sketch of a single, increasingly competitive world market is relevant to the issue of plant location in one basically simple way: it means that maximisation of profits will play the over-riding role in decisions to develop new capacity, with other considerations taken into account only when they clearly support or potentially hinder attaining that goal.

Chapter 3

## "OPERATION 1992" AND THE SINGLE MARKET

The creation by the end of 1992 of a single market comprising the present twelve Community countries can be expected to weigh heavily upon decisions about the localisation of economic activities, and to do so in several different ways. All of them will be associated with the disappearance of the frontiers which have hitherto subsisted, restricting free movement of all the factors of production.

The motivation of the big industrialists, whose pressure was instrumental in getting the single market accepted as a goal by the member states, was to achieve the bigger "home market" they needed to compete successfully with their rivals in the USA, Japan and the emergent industrial economies. Although long since planning in terms of the Community market, these firms found that the need to adapt products to different specifications and norms for the different countries prevented them from benefitting from economies of scale. For them, the single market is going to imply the possibility of concentrating manufacturing capacity to achieve optimisation of profit margins.

A second group of firms are those which despite the absence of customs duties on intra-Community trade were deterred from operating in other countries by what the European Commission called "the costs of non-Europe" : delays at frontiers, bureaucratic obstacles, VAT and excise differences, residual national quotas in sensitive sectors, health and veterinary controls,etc.

The Commission counts on a boost to competition as these firms seek to benefit from the removal of all remaining barriers. The key question for plant location is how they will go about the process of obtaining a share of the markets in other countries. There are indications that this will be done less by establishing new fully-owned subsidiaries, or new manufacturing plant, than via an already existing company in the country concerned.

Creation of the single market does nothing to eliminate other obstacles, such as language, different sales practices, different legal frameworks. The evidence is that firms are above all interested in formulas that enable them to tap the skills of people working in the home market which they know best. This means opting for a whole range of links: outright take-over, to obtain a foothold in a new area ; mergers ( but the way has yet to be smoothed for the creation of "European" companies with legal existence throughout the Community ) ; reciprocal investment

agreements ; pooling of research and marketing, etc.

Once this sort of link is established, the way is open for the development of a joint strategy, which is likely to involve rationalisation of production patterns, with closure of less efficient plant. If there is joint investment in new productive capacity, it will be located as a function of the new, broader market.

There are two possible scenarios. One is the search for a suitable partner as a way of getting a foothold in another national market. While certain factors, like the availability of business services in an accessible language, may have their impact, the over-riding concern is going to be the profile and prospects of the potential partner: its general dynamism, openness to new technologies (important for cross-frontier communication), and market share.

The other scenario concerns the impact of the elimination of economic frontiers dividing areas which are economically complementary, but which have tended to be oriented more towards their respective national markets. Examples of this are : Catalunya and the Languedoc area, on the Mediterranean coast; the Saar, a region of the Federal German Republic, the Lorraine area of France, and the Grand Duchy of Luxembourg; Alsace and the region of Baden-Wurtemburg on the other side of the Rhine...

*"..Nevertheless, whether they like it or not, the frontier is fading away. The notion of local or regional market is shattered, and is giving way to that of the Euro-regional market" .(5)*

Regional authorities in these complementary regions have in many cases been quick to see the potentialities of the new situation, for boosting local prosperity and for winning them a greater margin of autonomy from centralised national policy-making. They have begun to provide the back-up that will encourage firms to take advantage of the fading away of frontiers.

Thus in the Saar - Lorraine - Luxembourg triangle, there are plans to create a network linking data bases in the three areas; the university libraries of Saarbrucken and Metz are to be linked by minitel; in Lorraine, the rolling stock has already been ordered for extending the Metz-Nancy shuttle to Saarbrucken in 1992. (6)

In the south-west of France, the regional council of the area Languedoc-Roussillon has been pushing for the constitution of a "Euro-region" which will also comprise Catalunya and Midi-Pyrenées.

Such moves are likely to be only the beginning of an upheaval in attitudes, and cannot fail to influence decisions about siting, both by firms within these areas and by others seeking signs of dynamism and expansion.

A particular impact on the location of productive capacity - with a marked reduction in the number of sites - is predictable as a result of the opening up of public procurement. Whole sectors of industry which have benefitted from total protection are due to be thrown open to the icy wind of competition.

*"Between 7% and 10% of gross domestic product in the 12 is spent on public sector contracts for major purchases (from locomotives to computers, and including defence and the building of roads, dams, schools and hospitals). Only a minute share of these contracts (0.14% of GDP) goes to firms from other EC countries.... But the Twelve are now politically committed to opening up these markets.*

*The non-Europe report predicts massive price savings, running into two digits and even reaching 50% or more, as competition bites home. In many of the sectors of industry involved there is an excess of productive capacity (eg 60 % for turbine generators, 50-80 % for locomotives, 80% for mainframe computers, around 70% for public switching equipment, and no less than 90% for telephone. Inevitably, the report predicts a sharp drop in the number of firms in these sectors (eg from 15 to 4, in the five countries surveyed, in boiler making, and from 16 to 3 or 4 for electrical locomotives)." (5).*

It is consequently unavoidable that there will be a major cut-back in the number of sites at which these previously protected products continue to be produced. Since their special status gave them what seemed a guarantee of permanence, they have tended to become the predominant activity of a particular locality, thus rendering the impact of closures all the more dramatic. (6).

One predictable effect of 1992 is a worsening of the competitive position of outlying areas in the context of the wider frontier-free unit. This is particularly the case for the islands, since the dual disadvantage of time-lag and transport costs will in no way be lessened by 1992 as it will in the case of land frontiers. This relative disadvantage will be further heightened by major bridge and tunnel schemes, bringing the privileged central areas nearer to each other).

The transport cost factor is a double one, since it applies on the cost side to raw materials or to specialised equipment and spare parts, as well as making the finished product more expensive on markets in the central areas. Local markets in the outlying areas are too limited to provide a home base for expansion to take advantage of the broader markets theoretically available.

The implication for plant location is clear: 1992 constitutes an added disincentive to investment in the peripheral areas.

Chapter 4

# BEYOND THE COMMUNITY OF TWELVE

Since the negotiation and adoption of the Single Act, setting out the blue-print for the single market of the Twelve, a series of other factors have come into play, bringing potential rapid changes in the economic frontiers in Europe. One is the likelihood that the single market will be extended to the six countries of the European Free Trade Association. A second is the upheavals in central and eastern Europe and their conversion to the western model of "market economy". A third is the changes already made, or likely to be made, in the economic system in the Soviet Union, with the prospect of a similar fundamental shift, and an opening up on a massive scale to economic cooperation of all kinds with (among other) western European capital and initiative.

Each of these developments can have a major impact on the forecasts about the pattern of economic development, and about expanding markets and cheap labour, upon which decisions on location are based.

## (i) The "European Economic Space" : EEC-12 + EFTA

Talks took place, discreetly, in 1989, between the Commission of the European Community and the six EFTA countries - Austria, Switzerland, Finland, Norway, Sweden and Iceland - about the possibility of including them in a "European economic space" which would have the same characteristics and the same rules as the Community's "single market". Whilst there was a broad measure of agreement, there was a clash over institutions. The EFTA countries felt they should be involved in decision-making which would affect them; the Commission was hostile to any countries other than full members taking part in the institutional process.

The talks seem to have been motivated by the shared concern of industry and of governments in the EFTA countries that they would find themselves at a relative disadvantage through not being in the single market. As one economic observer put it (writing well before the talks were planned) :

*"The effect of economies of scale is, first of all, to magnify the gains for the EC Members of any increase in integration as a result of 1992.....From the point of view of EFTA, however, the more important point may be that a reduction in intra-EC barriers in the context of economies of scale will make location of manufacturing production in EFTA less attractive, requiring a possibly significant real depreciation by the EFTA nations in order to remain competitive" (7).*

The author made a strong case for "what we will see is a general proposition, that EC integration imposes costs on EFTA unless the EFTA nations match their neighbours' moves toward integration".

The agreement has yet to run the gauntlet of full public and parliamentary debate, and could encounter considerable opposition on the grounds that it implies a major surrender of sovereignty, since the Six, though not Members of the Community, would find themselves forced in practice to model their economic policies on those of the rest of the single market area.

If adopted, it could have far-reaching implications for location. Without it, firms in EFTA countries would have sought to establish manufacturing capacity within the area with the biggest market - as many leading Nordic firms have already done - in order not to suffer the relative disadvantage implied in trading across the frontier round the single market. Once assured of being "insiders", they will be subject to the same factors as firms in the Community.

Certain areas which would have been peripheral, and therefore at a disadvantage, in relation to the single market of the Twelve, could find themselves in a more favourable position in relation to the "European economic space". A specific example of this is the Land of Schleswig-Holstein, which has already begun to take steps to extract the most advantage in terms of investment from a double "bridge" function: between the Community and the Nordic area, and also between western European countries and east Germany, with a longer-term prospect of reassuming a historic role as gateway to the Baltic.

Not to be forgotten is the fact that negative effects of integration predictable in the context of "operation 1992" - the relative deterioration of the position of outlying areas - cannot fail to be felt in a similar way in the broader EEC + EFTA context. Obvious potential victims of this are the vast northern areas of Norway, Sweden and Finland, which will be relatively even more remote from the central areas than they already are in their national context or within EFTA.

**(ii) New to the market: central and eastern Europe**

Events in central and eastern Europe have served as a reminder that social upheaval and

political change can radically, and almost over night, create a new set of economic conditions.

There had been in recent years a trickle of "joint ventures" combining capital and know-how from western European countries with state-owned plants in the countries concerned. (8).

Now the determination of all the countries, some without waiting for their first country-wide elections, is to introduce the "western market economy". Western firms will be exploring the central and eastern European countries, seeking to obtain the maximum advantages from producing in there.

There is a double attraction: establishing a foothold in markets which are expected to expand as living standards rise through closer links with the rest of Europe; and lower costs of production ( lower wage costs, lower levels of capitalisation) for products made for export to western European markets.

There is concern in southern Europe, and also in third world economies, that resources that would have reached their economies may be attracted to eastern Europe.

On the other hand, there are deterrent factors.One is the low levels of efficiency, and lack of modern equipment, which make it hard to compete in terms of quality on western European markets. There is less incentive to locate production in eastern Europe if it means having both to rebuild the factory and to re-tool with expensive western material. The reluctance of western investors to take over the famous Lenin shipyard in Gdansk was an early warning of this sort of problem.

Environmental considerations are a factor that is bound to count here. Much of the industrial plant in eastern and central Europe would have to be shut down at once if norms for emissions prevailing in the Community were to be applied. For political reasons, there can at best be a transitional period, so investors can reckon within additional factor making for higher costs.

**The German Democratic Republic (DDR): a special case**

The economic problems arising over the future of the DDR are not qualitatively different: inefficient production methods, out-of-date machinery ( by western standards), and unacceptable levels of pollution. What is different is the political option, backed by a political majority and accepted by public opinion in both German states, to absorb the east German economy into that of the Federal Republic. The Federal German Republic is committed to foot the bill, whatever it comes to.

The estimates available are breath-taking.

*"The sum being talked of in Germany for the effort needed to re-build the east German economy comes to DM 1,000 billion. Although this is approximate, it is not unrealistic given the*

*scope of the task. The fixed capital of the 126 big industrial combines is in fact officially evaluated at DM 634 billion. So it would be a question of renewing all the economic infrastructure. Spread over ten years, the annual input would represent 37% of the net material product of the DDR." (9)*

The total of DM 1,000 bi.includes an estimated DM 300 bi. for new buildings (10).

The approach of the Federal German government to hauling the former East Germany into the western economy is not dissimilar in kind to that under-lying "operation 1992".But the process will be more rapid, and probably more brutal.. The funds need for the process of "re-structuration", as it would be called in western Europe, will come essentially from the private sector (the Federal government will have other burdens to bear, such as guaranteeing pension rights and paying out unemployment benefits in D-Marks).

The predictable result is that whilst there will be re-construction of plant where a western partner can be convinced of the long-term viability of modernisation, there will also be a wave of closures in sectors where the productivity gap is too great to be bridged. Reliable forecasts of possible unemployment are not available, but the figure of some 800,000 in 1989 and not far short of 2 million the following year was mentioned in the press.

The exodus of skilled workers, which began in October 1989 and has not ceased since, will also have its impact on location. It renders more hasardous the renovation of production units in the DDR who have lost many of their key operatives, whilst those who left will constitute a mobile and potentially adaptable labour reserve for companies moving to new sites in the frame-work of the single market.

There is another indirect dimension to the impact of the merger of the two German states. It concerns the funds available for regional development.

*"The funds destined for development policies, in the Community budget for 1990, come to nearly 6 billion ECUs or 12.5% of all payments. Certain countries receive, mainly through the European Regional Development Fund, financing which is often vital to their economies. Greece, Ireland, Portugal and Spain, but also Italy and Denmark are in this position.... In relation to the seven countries which are net beneficiaries of EEC resources, the FGR is the leading source of funds. On an average over the period 1985-1988 it received 14.1% of budgetary outlay but provided 27.4% of the resources....*

*The unification of the two German states will necessarily change the balance of the Community budget... Two solutions exist for meeting thepotential needs of the DDR: increasing income or sharing spending differently....*

*Rather than a direct cost owing to higher contributions, the effect of German unification for countries that are net beneficiaries of Community funds will be the cost of receiving relatively less from Community resources..".*

In so far as these funds genuinely promote regional development, the impact of this relative deterioration will be to diminish the location of new activities in the areas concerned (11).

**(iii) Tomorow the USSR**

What has been said about future economic relations with eastern and central Europe, and with the DDR, could turn out to apply, in a longer time-scale but also on a far bigger scale economically to relations with the Soviet Union.

If there were to be a comparable opening up to western capital and know-how, the result could be a shift of resources eastward, at the expense of the peripheral areas of the Community (or the broader European economic area). The prosperous central core of the European economy would tend to switch its concerns from relatively limited prospects in western and even eastern and central Europe, in favour of virtually unlimited markets and sure profits in the Soviet Union.

If the Soviet Union were to give its preference as partner in its "modernisation" to its European neighbours (rather than to the Americans and Japanese, or in preference to a free-for-all), the impact could be to shift the economic centre of gravity of Europe to the east.

Chapter 5

# INFORMATION AND TELECOMMUNICATIONS TECHNOLOGIES

New information and communications technologies represent one of the most dynamic factors impinging on the organisation of industry, and thus on location, both in the near future and over a long period to come. For the sake of clarity, various possible effects need to be distinguished, and their relative importance assessed, namely:

(i) the emergence of an "information economy" in which the ultra-rapid processing and transmission of information is the central factor;

(ii) the development of areas where industries researching and producing these technologies cluster together;

(iii) the application of the new technologies to all stages of the production cycle and to all sectors of the economy, bringing about fundamental changes in the organisation of industry.

We shall look separately at the "information economy" phenomenon, then at the "Silicon valley syndrome". We shall then pause to summarise the changes taking place in the organisation of industry, as a prelude to examining what the new flexibility means for location.

## (i) The information economy

The treatment of information by computers and by telecommunications technologies is coming to play an increasingly large part in economic activity. A useful distinction has been made between the 'primary information sector', which covers firms supplying information goods and services, and the 'secondary information sector' which includes all information services produced for internal consumption by governments and firms other than those in the information business. A specialised OECD committee has estimated that between 40% and 50% of the employed workforce in industrialised countries is involved in information-handling occupations under one of these two headings. (12)

The most significant impact of the new technology probably lies in facilitating centralisation of decision-making and control, whilst at the same time permitting location of production, including de-centralisation, according to the dictates of profit maximalisation.

There has been a clear location impact of the spread of telecommunications within firms. Contrary to what might instinctively have been expected - namely, that a "network economy" would lessen the isoltation and increase the involvement of peripheral areas - the tendency has been for a growing concentration of information and telecommunications hardware in the developed regions, and a growing gap between them and the outlying regions.

Thus *"empirical evidence (.....) suggests that in spite of (this) undoubted potential, peripheral regions are lagging behind the more prosperous core regions in their use of advanced communications and computer network innovations.*

*At the European level, the limited (and now very dated) evidence points unequivocally to the over-representation of the use of computer networks by enterprises and organisations located in capital cities." (13)(14).*

Another aspect of the "information economy" which has aroused considerable debate is the potential for a shift of location away from areas of industrial concentration, as soon as this is made possible by progress with information and telecommunications.

There has been considerable speculation about whether the vastly expanded capacity to process and transmit information rapidly could result in a dispersion of economic activity. The evidence is that this trend is subject to considerable limitations. There are a limited number of professions which can now in theory be exercised anywhere, because the material to be worked upon and the service provided can be transmitted without any geographical constraints. Design, programming, research, translation all fall into this category. It is reasonable to predict that there will be a steady migration of individuals and specialised suppliers towards areas in the south of Europe which offer a mild climate or other 'quality of life' advantages. Nevertheless, in economic terms this kind of move is liable to remain marginal for a long time to come.

It is important not to fall into the trap of drawing parallels between the development of an information economy, based on telecommunications networks, and improvements in the transport network.

Transport infrastructure and services are essentially available to all: computer networks are essentially exclusive and limited to those firms that can afford to develop them. The only valid parallel in the transport field is the "executive jet".

**(ii) The Silicon Valley syndrome.**

A great deal of debate among researchers and policy-makers has concerned "Silicon Valley and its lesser clones throughout the world" (15) - geographical clusters of firms all involved in researching, designing and manufacturing the new information and telecommunications technologies. The original assumption was that these groupings would exercise a power of attraction for industry, and thus provide a useful stimulus to regional development.

But as it has been suggested,

*"..the association between information technology and regional development has become... confounded, so that considerable effort is being expended on trying to create zones of "high tech" innovation, while the much greater competitive advantage that would ensue from the transformation of existing industries through the application of those technologies goes almost unrecognised. It is as if researchers in the mid-nineteenth century, on hearing that the second 'Kondratieff' was being founded on the steam engine and the railway, had decided that its geography would be revealed by intensive study of locomotive production..." (16).*

Such clusters have been found to be advantageous to the firms directly concerned - acute competition, virtual market transparency resulting in part from the high level of staff mobility from one firm to another, and cross-fertilisation of research - but there has been little evidence of any spill-over effect, attracting firms from other sectors and sparking off a boom process.

The case of the Japanese "Science City" at Tsukuba

*"can, with restrictions, be cited as a success for a regional high tech development strategy. There was a massive input of state resources, over a period of years, to promote the networking of science, high tech industry and economic and social infrastructure, and in this way the conditions were created for a autonomous regional development (17). Yet Tsukuba has still not overcome its enclave nature and so far, too, it has produced scarcely any 'Spin-Off' effect in the form of the establishment of small companies or production-oriented service firms"*

The French "Technopolis" project near Nice seems destined to remain a specialised enclave rather than becoming the pole of an area of lively economic development.

Thus it is not the development of concentrations of firms producing information and telecommunications material, whether this happens spontaneously or with public sector support , that will have any marked impact on location by attracting more general economic activity.

**(iii) Changes in the organisation of industry.**

A far broader impact is to be expected from the application of new information and communications technology in all sectors of industry and at every stage of activity - from research, through resourcing and assembly to marketing.

For the sake of clarity, this section will be devoted to a brief summary of how the application of the new technologies is affecting the organisation of industry.(20). The following section will then deal with the possible impact on the location policy of the firms that have adopted the new technologies.

The application of technologies for the collection, classification, storage, processing, transmis-

sion and application of information is bringing about fundamental changes in the organisation of industrial production but also of all other economic activities. Under the changes covered by the term automation, physical work was replaced by the activities of machinery (and the energy they consumed ).Now it is human intelligence that is being replaced, e.g. by programming, on a computer terminal, the series of activities which a machine is to carry out, whereas previously it was left to an operator to give the machine instructions at each stage.

*"The person-machine system which hitherto underlay the process of industrialisation has been fundamentally extended by the new information technologies. Hitherto the person-machine system consisted essentially of a combination of energy and tools. The development of machine intelligence has made it possible to expand the traditional, largely inflexible person-machine system through the inclusion of "information machines", into flexible systems controlling and regulating themselves" (21).*

There are no clear-cut distinctions between previous practices and those made possible by the new information technology. Instead, there is a continuum. At one end of it can be placed the furthest developed case of mass production: a car plant, planned and equipped to turn out the maximum number of identical models; the work process is broken down as far as possible into simple manual operations; the pattern of management is a steep pyramid; the site is situated as near as possible to the principal markets; and components and supplies are obtained from owned or dependent suppliers wherever in the world they can be obtained at the lowest cost. (Such a factory probably no longer exists).

At the other end of the scale is a factory where each unit produced meets the specific requirements of a particular customer. To achieve this, the firm receives instant information from its sales network about orders placed; its computer is programmed to integrate ever detail of each order into its work programme, allowing for the required operations and supplies; orders for the relevant parts are transmitted to suppliers, and delivered to order, ready checked, within a minimum time-lag. Workers have largely been replaced by robots, which are capable of carrying out a series of different operations, and are programmed by the central computer in order to ensure that the desired unit is produced.

We could say that in the first case the ideal was to produce as many identical objects as possible; in the other it is to be prepared for every single object produced to be different. and producedat the right time.

The shift from one approach to the other has been progressive. To some extent, the growing difficulties encountered with mass production led to efforts to adapt. To some extent also, breakthroughs in technology, and their application, were at the origin on changes in the pattern of production.The mass production approach turned out to be more and more inadequate in the face of new market trends.The traditional assembly line was developed to exploit to the utmost the "economies of scale", by producing at the lowest possible cost per unit.It was ideally suited to a stable and predictable market situation. But with the development of world-wide markets (encouraged by other applications of information and communications technology), and the emergence of low-cost producers in newly-industrialised countries, came major unpredictable fluc-

tuations in the level and pattern of demand.

To alter the level of production of a plant conceived and run in the old way was a costly operation. It meant either laying off workers and working below capacity, with a consequent drop in efficiency, or a slow and costly re-tooling operation to try to keep up with demand variations..

The introduction of information technology, using a computer programme to command robots, substituting one tool or process for another, and varying the order in which they will be carried out, ensures a far more flexible response to changing demand, and greater adaptability in the face of competition.

The challenge and response have been summarised in this way:

> *"..with market conditions evolving towards more variation in products, more individualised products, higher requirements about quality and performance, smaller batches and shorter innovation cycles, the mass production concept which was dominant hitherto was unable to cope: it was too specialised and consequently too rigid and inflexible. What was sought was a bridge between the two extremes of flexibility and specialisation. This bridge is made possible through a synthesis of the half-automatised machine systems used previously and a third, new line of technological development: the new techniques of information, data-processing and telecommunications.(22).*

It is possible to distinguish two main approaches to achieving flexibility within the plant. One is epitomised in the "computer-integrated plant", designed to achieve optimum technical performance by introducing computer control at every possible stage of production.

Hall No I at the Volkswagen works at Emden is cited as an example: the basic pattern of the assembly line is maintained, but it can be switched from one kind of coach-work to another, in a minimum of time, by changing the soft-ware and without the need for re-tooling. This is reported to have turned out in practice to have been both expensive and prone to stoppages. The reaction has been a swing away from "CIM" (computer-integrated manufacture) to restoring a certain degree of skilled human supervision. This is resumed in the slogan."*No CIM without CHIM (computer and human integrated manufacture)".(23)*

The alternative approach puts the accent on responding to the market, and on "horizontal integration". This revolves around innovation in work organisation, the traditional assembly line being replaced by small autonomous production units capable of running themselves : the "factory within the factory" formula.

The economic advantage of the new flexibility lies in the fact that the same plant can be used to turn out a range of products targeted on the same market. There is then a maximum return on investment.

Equally important have been the breakthroughs in "external flexibility". Traditionally, firms have guarded against an interruption in supplies to customers by holding stocks of both their finished products and the supplies needed for production. As other costs were reduced, it came to be realised that the time during which stocks were being transported, or held at the factory, represented a major cost burden.

*"Traditional rationalisation strategies were aimed at optimising isolated functions.The result is to be seen in most factories, which look more like storage space that places where production is taking place. According to O.H.Schiele, in the mechanical engineering sector today the actual time spent on production amounts to 3 per cent of the total time taken to fulfil a contract: 85 per cent of that time is taken up with transport, storageand waiting. As a result of this search for optimal conditions in separate sectors, the costs of holding stocks, of the capital tied up in the process, and of transport -so-called logistic costs - are disproportionately high" (24).*

Again it was information and communications technology which provided the answer, upstream and downstream from the main plant. As we have seen, production could be adapted to a precise picture of orders placed. On the upstream end, suppliers could be given exact details of requirements.

Minimalising these costs also involved constraints which as we shall see have direct implications for plant location. It was the Japanese who in the 70s began to apply the principle of "just in time" delivery - with suppliers responding to the manufacturing firm's requirements so accurately and so rapidly that it does not need to hold stocks. But this requires suppliers to be located within a certain radius.

**(iv) Flexibility and its implications for location**

Under the pressure of competition, the spread of the new forms of production and of organisation, resulting from the application of the new information and telecommunications technologies, is likely to gain momentum. So any indications that may be available about its impact on location decisions can be signposts to possible shifts in the pattern of economic activity.

Läpple, who has analyzed the conditions needed for the successful introduction of flexible production techniques, points out that it is important not to forget

*"... that the new information technologies are by their nature 'diagonal' technologies ("Querschnitttechnologien"), which can be applied in practically all areas of the production and the life of a society, giving rise to the most varied complementary effects. In addition, the new technologies are to a large extent dependent for their development and expansion on complementary economic social and cultural innovation,.... (25).*

The vital point being made here is that the spread of the application of the new technologies depends above all on local social, cultural and economic conditions. Läpple notes that contrary

to expectations, it is not areas with a "high tech." specialisation that are the most attractive. He cites the case of Hamburg and its surrounding area, which occupies a leading place in the Federal Republic in the "high tech." sector, with 20 p.c. of chip production, and the biggest German supplier of electronic parts, besides being the capital of the aircraft industry, with its complex demands and the home of many software and laser firms. Alongside this the Hamburg areas has a lot of firms using conventional techniques and producing conventional product ranges. There has been no impact of the first group on the second. *"The existing intra-regional relations of inter-action and cooperation are apparently too little developed or two fragmented for spin-off or synergical effects to make themselves felt between high technology sectors and the traditional sectors of the economy, and set in motion the dynamics of broadly-based innovation" (26)*

Thus Läpple considers that a re-evaluation of work, with a wider range of tasks, and higher qualifications are

*...factors that can favour or block the application of new technologies. The more heavily the structures of firms and regions have been marked by Taylorist principles of rationalisation and the related forms of fragmentisation and standardisation of tasks within and between firms, the more these economic, technological and social structures will be hostile to the introduction of the new technologies as part of a systematic rationalisation."(27)*

Läpple insists that firms seeking to establish a network of suppliers interested in responding to the demands of manufacturers practicing flexible specialisation will need to find regions where there is a tradition of dynamism, adaptability, and close-knit networks between firms.As already pointed out, these will not necessarily be the regions where there is a high proportion of high tech firms.

Here again Läpple notes the contrast between Hamburg, where firms have traditionally thought in terms of world markets, and thus of meeting their requirements on the best terms they can get from any supplier, world-wide, and the Baden-Wurtemburg area, where the tradition is to meet requirements from local resources found through a network of contacts (28). Another researcher confirms that Baden-Wurtemburg is among the most flexible industrial areas to be found in the Federal Republic - thanks to the on-going strength and vitality of handicrafts in the area since the Nineteenth century. A network of technical schools and advisory offices, set up then, currently assists small-and medium-sized firms in developing or adapting to flexible solutions. (29)

A specific facet of flexibility concerns the "just in time" requirements of the new approach. When the concept, developed in Japan, was introduced into the United States, it was in terms of "one truck day" as the maximum distance a supplier should be from a firm - autombile, textiles, electrical engineering - that was practicing flexible specialisation. In Europe the equivalent requirement is for components to be loaded the day they are ordered, and be unloaded on site at the start of the next working day.

A report on the application of flexible specialisation in two areas in the Netherlands comments on the same approach.

*"Every effort is made to ensure that the time it takes for a product to go through corresponds to the real production time. By eliminating 'dead time' (stocks) or wasted time ( production errors and surpluses) from the production process, the aim is to achieve optimum production from the point of view of efficiency". (30).*

Major firms planning to start production at a new location face a choice: to opt for a site where there are adequate suitable suppliers within the required radius; or, as some Japanese firms have done, to persuade their traditional suppliers to establish branches near the site to be chosen.

The formula of a large manufacturing company, influenced in its location policy by the need to have suppliers within a certain radius from its assembly plant is only one possible scenario for the impact of introducing information and telecommunications technologies. Bierter refers to the case of Prato, with its 15-20,000 small firms in the wool and woollen goods trade, employing a total of 70,000 workers, and grouped in five cooperatives. He concludes that the local traditions of solidarity and flexibility enabled information technologies to be successfully introduced:

*"Production is de-centralised, and the many small firms maintain a high degree of flexibility, by combining a range of old and new techniques, so that they can adapt to variations in demand. The small firms are grouped in five cooperatives, which help them maintain their independence from the few bigger firms. The cooperatives have their own research unit which plays a central role in stimulating and spreading innovation. The innovation process is continuous, as small firms seek to keep up, and to avoid high costs for new machinery. The introduction of electronic technology has been one of the more recent moves.*

*"The example of Prato shows how a small industrial region can develop an extremely flexible industrial structure on a decentralised basis. The key point is not just that all the firms work on a craft basis, but rather the way all the firms work together as a network without surrendering their flexibility or autonomy, and maintain a continuous process of innovation.... The success is to be put down to three factors: a deeply-rooted cultural tradition, the introduction of electronic technology in an innovative environment, and the specific social and economic structure of the centralized region. These are also the reasons why the introduction of electronic technologies had no negative impact on employment.. " (31).*

The following conclusions can be drawn about the relationship between flexible specialisation and siting. The search for dynamic and flexible suppliers, combined with the just-in-time requirement, will result in capacity being located either in areas with a long-standing tradition of networking, or alternatively in newly developing regions where suppliers can be persuaded to instal the necessary capacity. In so far as the spread of the new technologies results in a change of attitude, and a more receptive approach, then the need to seek out particular regions where there the right conditions prevail may lessen, and the general pattern of industrial production will be increasingly a matter of net-working. This would be a complementary development to the complexities of multiple ownership and reciprocal holdings. In a more fluid situation, of this kind, it would be other factors that would determine location.

Chapter 6

# POLICIES FOR REGIONAL DEVELOPMENT

In a more competitive economy, the gaps between prosperous and poor regions are likely to widen. The European Commission's official report on the impact of "1992", whilst admitting that it has not attempted the task of forecasting the distribution by country or region of the aggregate gains from market integration, seeks to suggest that there is no established wisdom :

*"theories of vicious circles of divergence of regional fortunes resulting from market integration exist, but so do alternative theses that point to more balanced or indeterminate outcomes" (32).*

Its brief and somewhat sanguine comment is :

*"In any case, policy instruments exist to provide an insurance policy to help initial losers recover (e.g. the Community's structural Funds, whose substantial expansion has recently been agreed).(33).*

The popular version warns that

*" If the new rewards are not shared fairly, the EEC home market will rest on a brittle skein (sic) of regional and social tensions.... Undoubtedly...assistance will be needed for the Community's declining regions."(34)*

European Commission President Delors, in his report on the deliberations of the committee of govenors of central banks of the member countries about plans for monetary and economic union, also deems it necessary to warn against the risk of increasing regional divergences.

Since it is the sum of individual decisions about the location of production that determines how the pattern of economic activity ( and prosperity ) changes, the success of policies to limit or reduce gaps between regions will depend on the influence they manage to exert on those decisions.

We shall look at two factors:

- the traditional "regional policy" option, consisting of re-distributing funds to the benefit of poorer or declining areas, and involving a "from-the-top-down" approach;

- policies originating with the elected authorities of regions or municipalities, and concentrating on creating a business climate which will attract new firms because it provides answers to their practical problems. Such policies work "from the bottom up", though they also need a constructive and cooperative approach at the national and Community level.

**(i) the limitations of re-distribution policies**

The traditional approach of "regional policy", be it at the national or the Community level, has been to provide maximum amounts of financial support, to be used either for improving the infrastructure of backward regions - in the hope that this will be sufficient to attract private sector investment - or as a direct subsidy to firms, to cover part of their initial investment in the hope that they will then become a viable part of the regional economy.

Too often, the vast infrastructure projects - roads and governors, industrial estates - have failed to attract industry, and have survived like monuments amid declining rural populations whose priority needs lay in vocational training or housing. There have been scandals as firms, having benefitted from subsidies as long as they were available, then moved out.

The hand-out approach has also encouraged firms to play one regional authority or one national government off against another, to obtain the best possible offer in terms of investment subsidies or tax concessions, and governments were trapped into bidding against each other.

**(ii) creating a fertile soil for business initiatives**

In the past decade, considerable experience has been built up, in many parts of Europe, of another approach to ensuring an adequate level of economic activity in regions, especially those economically backward because of the decline of old industries or an outlying position.

Central to this approach is the idea of creating the right environment for new activities. (35).

There is a long series of factors that can contribute to making a region attractive even though it is not currently in the mainstream of economic development

- availability of development banking services

- availability of trained personnel, or of training facilities adapted to local or regional needs;

- good local transport infrastructure

- availability of public sector facilities for up to date information and telecommunications technology (36)

- availability of a data-base on local markets, suppliers, labour force, services to firms,etc.

- "quality of life" - distance from cultural centres, from recreational centres, from capital cities. The existence of a high-speed-train link can bring about a fundamental change in the "psychological distance" of a region

- availability of "one stop" providers of a series of inter-locking services of the kind needed by a firm when moving into a new area (banking, tax counselling, data base, real estate dealing,etc.).

- existence of regional or municipal government authorities able to exert real influence on the "climate" for new activities, or able to intervene at the national level to solve problems.

- low energy costs, resulting from the development of alternative renewable energy sources

Chapter 7

# TRANSPORT FACILITIES

Developments in the availability of transport facilities -both services and physical infra-structure - constitute a factor those impact on the siting of economic activities is clear and direct. The ability to transport persons or goods faster, and the shortening of distances by building tunnels or bridges, can change the relative advantages of different sites in terms of supply costs and access to markets.

The coming decade will see several kinds of change, in particular the emergence of a Europe-wide network of extra-fast rail links, and a series of major public works projects for tunnels or bridges to overcome natural obstacles.

The initial extra-fast rail links were in France, and followed the traditional spider's web pattern, with Paris at the centre. The effect was to bring an increasing number of provincial towns within a few hours rail travel from the capital.

This has had a dual impact. On the one hand it has made it possible for individuals to opt for the calmer life of the provinces - or even the countryside - whilst still spending a certain amount of time in Paris, where decision- and policy-making continue to be concentrated. Thus there is a de-centralising effect on residential patterns, and in some cases on the balance of staffing between the provinces and Paris. On the other hand it has also increased the scope for those who prefer a Parisian base to go on living in the capital whilst spending a major part of their working time in the provinces.

In a second phase, which involves filling in gaps in the radial pattern, there are also some steps towards a province-to-province network (eg Mulhouse-Dijon). But it is too early to draw conclusions about its impact. To allay fears about a possible concentration of industry in a central north-south strip of Europe, the French are planning an east-west branch that would link Paris and also the west of the country to that area.

More significant may be the development of a Europe-wide extra-fast-train network, including a northern shoot from Paris via Brussels to Amsterdam and also to Köln to link into an all-German network, and a Paris-Madrid link. The opening of the Chunnel will plug the United Kingdom into the European network.

These developments will encourage firms to keep their managerial staff located in the capitals and other cities served by the fast train network, and can contribute to a general trend to attract activity in from outlying areas to cluster around the central zones with higher concentrations of activity.

The rail network is not the only factor. The motorway network continues to become more dense. Here, too, the French are anxious to provide the east-to-west thoroughfare that has so far been lacking, lest Paris and regions further west should find themselves progressively more peripheral in the European framework. The idea of developing zones of new industrial activity around the major motorway "cross-roads" is also being mooted.

Ambitious civil engineering projects can have a clearer and more concentrated impact. The list of such projects, launched or planned, includes: the Chunnel; a new tunnel under the Alps doubling up on the overloaded Gotthard; the Messina bridge linking Sicily to the mainland; a road and rail overland link from Germany via Denmark to Sweden; and one or more new tunnels under the Pyrenees.

A site in the proximity of such undertakings offers the benefit of being closer to markets at both ends of the bridge or tunnel. Thus United Kingdom firms are establishing themselves in the Nord-Pas de Calais area, so as to break into the rich markets of the south-east of England from a home base. The Sweden-Denmark link-up can improve the relative position of firms at either end of it.

The converse should not be forgotten: that projects eliminating obstacles that increase distance further worsen the relative competitive position of firms in outlying areas, or on island sites.

Chapter 8

# ENVIRONMENTAL FACTORS

Environmental considerations are going to weigh more and more heavily in the policy-making of firms in the years ahead - certainly more than is currently realised.

A series of factors combine and inter-act to create a new context and new constraints :

- the pressure of public opinion, working through local action groups, issue-oriented international (non-governmental) organisations, consumer organisations, and also patterns of individual behaviour. Behind this lies the steady development of public awareness of the scope of environmental problems, above all the threats identified at the planetary level. It has taken two decades, since the first warning voices were heard, to move to the present situation where ecological issues count among the top sources of popular concern, at least in the economically developed countries. But there is still an immense gap to be filled in terms of information. And beyond that lies the spread of the realisation that pollution and environmental destruction are inseparable from production as it is at present organised, and from growth as currently conceived.

- the relatively recent recognition of environmental issues on the part of political parties - essentially under the competitive pressure of the success of "green" parties. Even if this recognition does not result in any fundamental change of priorities, or a full grasp of the implications of ecological concerns, the acceptance of environment as a major political issue is a vital step towards the implementation of the kinds of policies needed.

- growing action on the part of public authorities, at every level - local, municipal, regional, national, Community, international - to tackle environmental challenges.

These factors have contributed to the beginnings of a new approach on the part of industry, reflecting a realisation of the need to accept responsibilty for the environmental impact of economic activity, and a discovery not just of the constraints to do so but of potential advantages even in terms of the firms' own interests.

Within the context of this general trend towards awareness and commitment, there are immense gaps from one country to another - and it is here that any potential impact on location is to be sought.

Historically, there can be little doubt that emergent environmental pressures weighed upon siting decisions. When in the late '6os and early '7os protest against local pollution by citizen action groups began in the Netherlands, the threat that companies would invest elsewhere was an important factor in the public debate. There were cases of planned investments which were abandoned in the Netherlands under popular pressure only to be carried out elsewhere. One such plant, refused by the Dutch because it would be a source of dangerous pollution including lead emissions, was headed off a second time by the inhabitants of the village of Marckolsheim, north of Strasbourg, who occupied the site for several months to get the plan dropped.

More generally, there was talk of a general tendency for heavily polluting industries to seek refuge in third countries, and in particular in the developing countries, to escape tighter controls in Europe. But the extent to which investment flows were really affected is hard to estimate.

The inclusion of environmental matters in the remit of the institutions of the European Community was of vital importance in view of the gaps existing between countries in terms of awareness, public pressure, legislation and enforcement. In those sectors covered by Community directives, the incentive to shift production to a country with a low level of environmental awareness and concern, in order to enjoy lower costs is defused if the same norms are applicable throughout the area. Even if enforcement is stricter in some countries, that alone is unlikely to be a decisive factor in shifting production.

The approach on the part of both national and Community authorities to discouraging industrial pollution is undergoing a rapid evolution. Initial general slogans, like "the polluter pays " ( a dubious approach which seems to imply that pollution in unavoidable, and suggests financial sanctions rather than prevention ), are giving way to plans for the use of economic instruments that will operate by enlisting market forces. An example is the idea of selective "green" taxation, which can be manipulated to discourage or eliminate polluting or destructive activities such as excessive use of fossil fuels, or the import of tropical hardwoods.

Another approach being explored is the imposition of an "ecological audit" system, whereby firms' activities would be vetted to ensure that they did not result in pollution or waste scarce resources. In the Netherlands, still in the lead, the government is envisaging the idea of a system of control of ecological impact within the firm to be a permanent requisite, like the keeping of accounts (37)

Two factors are coming to be accepted by companies. One is that environmentally responsible production can actually turn out to be more efficient and more profitable. Techniques to eliminate polluting emissions from factories can result in the recuperation of valuable trace elements. Re-cycling can mean a cut-back in expenditure on materials. Research on new processes or new materials to eliminate pollution may bring major cost reductions. Re-cycling of water used in production, to avoid pollution streams or rivers, can drastically reduce quantities used, at a time when the costs of water look like rising (38).

The other realisation that is spreading is that being "clean" or "green" - not causing pollution or

wasting resources - can contribute to a company's public relations image. A growing number of major companies have adopted "corporate strategies" destined to ensure that they are not seen as being responsible for pollution.

The experience of the regional authorities of Emilia Romagna is significant of the new approach. Anxious to reduce the level of industrial pollution in their region, they have begun to insist the all new investors should be prepared to meet the strictest possible anti-pollution rules. They have found that dynamic companies, attracted by the region's economic stability and steady growth, do not view this requirement as a deterrent (39).

An interesting comment on the inter-action been public opinion and industry is provided by the emergence in the recent past of investment funds whereby individuals wishing to invest can be sure that they are not supporting firms that pollute, or even that their funds are going only to firms active in preventing pollution or helping to clean it up (40).

A major problem about pollution exists in eastern and central Europe and the Soviet Union, where the authorities had hitherto behaved as though pollution and environmental damage did not exist. One result has been a number of dramatic cases of large-scale ecological disaster, like the shrinking of the Sea of Aral through irresponsible use of water to irrigate a monoculture of cotton unsuited to the conditions.

The other result is levels of pollution by industrial plant which would not be admissible under western norms. This can have a direct impact on location, with potential western partners, who can hardly share the responsibility of continuing to produce under the prevailing conditions weighing whether they can afford the extra investment in new plant or in pollution prevention that will be needed.

Any conclusions about the relation ship between environmental considerations and location of economic activity must remain tentative. It is clear that the temptation to produce in areas where there are not strict anti-pollution norms can be a powerful one, in the context of international competition. Within the framework of the European Community at least, the combination of Community-level legislation and an increasingly vigilant public opinion seem largely to have countered that trend.

Chapter 9

# ENERGY: POTENTIAL FOR CHANGE

Energy costs constitute a relatively important share of overall production costs. Energy price differentials could potentially be a factor influencing decisions about location.

The current situation in the European economies is one of dependence essentially on fossil fuels, plus in some cases a major contribution from nuclear energy. The pattern is one of concentration of energy production - oil refineries and power stations (oil- or coal-fired at least) - in relation to the capitals and the areas of dense economic activity.

In the medium- and long-term, major changes can be expected in the pattern of energy supply, with the potential of alternative, renewable sources, hitherto largely neglected, being finally exploited to provide increasingly high percentages of total needs. A series of factors will combine to bring this about. One is the recognition of the rising real costs of nuclear energy, plus growing pressures to phase it out as problems of safety and waste disposal remain insoluble. Another is the likely reduction in costs of alternative energies, even with the current relatively low levels of investment in research, to the break-even points where they become competitive.

Potentially, a shift to renewable energy sources can have a considerable impact on energy prices and on location. Most of the potential lies in peripheral areas of the Community and for technical reasons many of the sources have a de-centralising effect. They can be produced and used on the spot.

Thus:

- photovoltaic solar energy has its greatest potential in the southern peripheral areas, in particular the islands;

- wind energy has its greatest potential in the coastal areas of the Community, which are in most cases peripheral within both the national and the Community economies. Denmark has already shown the way, with the spontaneous development of small-scale turbines capable of meeting the needs of local communities, farms and small enterprises.

There is major potential along the North Sea coasts and down the Atlantic sea-board.

- fast rotation forestry, as one element in the potential of bio-mass, also has its greatest potential in the northern parts of the western sea-board (for instance in Ireland) with high rainfall.

- wave power systems will also have their greatest potential off the western coasts of the Community, providing a major source of electricity for coastal towns and regions.

What this implies is a major factor potentially favouring plant location in the peripheral areas and running counter to the present concentration in areas whose needs are met from traditional energy sources.

More generally, the potential is for all energy requirements to be met by the right combination of locally-produced renewable energy: passive solar and photovoltaic; wind; wave (and in some cases tidal); geo-thermic (including hot-rock exploitation); bio-mass (thermal power stations or small-scale furnaces using either resources at present going to waste, or energy crops where these are environmentally acceptable ) (41); small-scale hydro-electric. This kind of development would offer a sound basis for economic developments rooted in the regions.

Chapter 10

# OTHER FACTORS

The list of factors capable of influencing the location of production is limitless. It seems worthwhile to make brief mention of one which has begun to emerge recently, and appears to have a considerable potential impact, namely bio-technology.

Junne, in exploring the potential for restoring the link between production and the region, cites a number of ways in which bio-technology changes the potential of an area.(40-a) Thus :

(a) bio-engineered product is agriculture produce bigger yields for the same crop areas, reduced need for artificial fertilisers and pesticides, and use of harvested products previously wasted . Products of bio-technology which are more effective can reduce large quantities currently required (eg sweeteners 200 times stronger replacing sugar intake),

(b) interchangeability of raw materials, using bio-technology, can reduce dependence on particular sources or suppliers (cf high fructose corn syrup, replacing sugar imports into the US; or single cell protein opening the way to a drastic cut in European soya imports from the US).

(c) bio-technology can also make possible local production of raw materials that previously had to be imported ( eg by bacterial leaching of low-grade ores, by improved "tertiary use" of oil, or by improved recycling).

(d) new products, developed by bio-technology, and often developed from widely available raw materials, can replace scarce and/or costly traditional materials (cf glass fibre, replacing copper wire for data transfer, and able to be manufactured from quartz sand readily available.

The overall impact here is to increase flexibility as regards sourcing for production within a given region, and thus widen the range of potential choices about location.

## CONCLUSIONS

The coming decade promises to be a period of far-reaching change and upheaval in the economies of the European countries, and not least in the distribution of industrial activity.

Pressures of different kinds, and with different time-scales, will make themselves felt where decisions on the location of economic activity or the development of new sites are being taken.

Against the broad backdrop of an increasingly unified and increasingly competitive world economic scene, firms in Europe will have to come to terms with operating in a new dimension without economic frontiers, comprising not just the present Community of twelve countries but in all likelihood the other main industrialised countries of Europe, and with the opening up of not just the eastern and central European countries but also the USSR to the market economy providing an added element of challenge and uncertainty.

At the same time, industry will be continuing its adaptation to the application of new information and telecommunications technologies, which bring new patterns of organisation at every stage of management and production.

On the basis of the evidence assembled in this report, it is possible to draw tentative conclusions about the overall impact the various factors will have in terms of location.

*1. The prevailing trend, under the pressure of competition, will be one of centralisation and concentration, with firms seeking to locate wherever is most advantageous in terms of costs and markets. Prosperous and dynamic areas can expect to attract extra investment, whilst the decline of old industrial areas which have failed to renovate, and the exodus from rural and peripheral areas will continue.*

*A study on trends in population distribution in central and north-western Europe, which takes into account a wide range of factors, concludes that in some cases they pull in the direction of higher metropolitan growth (42).*

*2. Poles of dynamic economic development will emerge, under the impact of some or all of the following factors, which tend to be mutually reinforcing:*

*(i) the stimulus represented by the removal of economic frontiers, at the latest by the end of 1992, between areas in different member states which are potentially complementary or represent a single geographical unit(cf Catalunya-Languedoc, Saarland-Lorraine-Luxembourg)*

*(ii) the advantages accruing to a region, previously peripheral in terms of the Community, from acquiring a "bridge" function in the wider economic area comprising the Community and the EFTA countries (Cf Schleswig Holstein)*

*(iii) major developments in the transport infrastructure, which make a region attractive for the location of industry through access to two countries or regions (cf Chunnel and its impact on Nord-Pas de Calais); this includes the extra-fast-train network and the advantages resulting from easy access to it.*

*(iv) the pull of areas with a tradition of dynamism and networking for firms seeking optimal conditions for flexible specialisation based on the application of the new information and telecommunications technologies*

*The combined impact of these factors can be the emergence of a "backbone" of economic development running north-south through the Community. It could start with London and the south-east of England, cover the Benelux with the major port areas of Antwerp and Rotterdam, extend through the industrial heartland of Germany and down the Rhine, linking then to the industrial north of Italy and along the Mediterranean coast to the triangle Catalunya-Languedoc-Pyrenées.*

*4. There is convincing evidence from the past decade that regional and municipal authorities can undertake a wide range of measures which have a positive influence on location. The key is to create an economic and administrative "humus" in which new industrial initiatives can flourish and put down roots. The right mix of measures will necessarily vary from area to area, but will need to involve in all cases: access to development financing; adequate and accessible information on local resources and markets; provision of user-friendly packages of services available in particular to foreign firms operating in little-known territory ; training facilities and the availability of qualified workers. (43)*

*Initiatives originating in the regions or municipalities cannot in themselves guarantee an economic breakthrough. They will need to meet with a positive and constructive response on the part of national and Community authorities. They will also be helped by the development in depth of inter-regional cooperation and solidarity, based on the pooling of information and experience.*

*It is interesting to speculate whether regions seeking to give their economy a solid industrial basis will be able to encourage the development of mutually beneficial trade flows or cooperation in research, on a bilateral or multilateral inter-industry basis.*

*If successful, active promotion of the kind of measures and facilities we have referred to can offer a possibility of projecting a region into the "winners'" group, with expanding population and markets and a reputation for dynamism such that location there is seen as compatible with overall pressures for profit maximalisation.*

*5. The converse of the advantages accruing from an improved relative position as a result of the single market or its extension, or transport infrastructure developments, or both, is a relative worsening of the competitive position, and pull in terms of location, of peripheral areas. A central zone of economic dynamism and growth in the Community or pan-European context has its counter-part in rendering peripheral areas even more isolated (44).*

*6.The question has been raised of whether recent developments, in particular those resulting from the application of information technologies, open up a prospect of restoring the solid ties which traditionally linked companies with the region in which they were located. It has been suggested that thescope offered by new production patterns - in particular the possibility of using the same machinery to produce different ranges of products, and thus to concentrate on a more limited market - could favour the emergence of firms linked to a region, and not dominated by multinationals (45).*

*Such "regional" firms could hope to meet their needs for capital from local financing authorities or development banks. They need not be dependent for technological know-how, which spreads with increasing rapidity. The advantage which multinationals enjoy in the form of marketing networks is reduced as mass production and mass marketing disappear. The impact of developments in bio-technology (cf above) could also work in favour of regionally based firms.*

*On the other hand, it has been argued that the pressure of competition, and the need for constant innovation, make the costs of research so high that only the multinationals can hope to bear them (46).*

*7.There is little that is encouraging as regards the economic future of rural areas, which may be either peripheral or constitute "grey zones" within theCommunity - Ireland or (tomorrow ? ) the north of Norway, Sweden or Finland, but also the Massif Central.Although it is not possible currently to venture beyond cautious speculation, there may be a series of elements pointing towards a certain kind of revival, among them:*

*- location of professions where information and telecommunications technologies permit work from a distance;*

*- development of recreational "industries" selling the virtues of open space and "wild" country-*

*side*

*- development of renewable energy sources providing both employment and a favourable basis for economic revival*

*- successful use of information and telecommunications technologies for linking rural societies into the social and cultural life of smaller urban centres*

It is tempting to see the future in terms of a tug-of-war. On the one side are the factors making for concentration of economic activity, around a new pattern of core areas. On the other are the conscious efforts of regional and municipal units to encourage the development of industrial activity that has roots in the area and provides a stable economic basis for a prosperous society with a degree of political, social and cultural autonomy.

This is an over-simplified presentation. But in so far as it has a certain basis in reality, it will be open to national and Community authorities to exert their influence on the outcome, by resource transfers or supportive measures tending to favour one trend or the other.

The two trends reflect to some extent two fundamentally different concepts of Europe's future. If it is to be conceived primarily in terms of maximum growth and of competition with other major economic units, then the scenario of a powerful central core, with a vast captive home market from which it draws labour and resources, is the more attractive - and the more likely. If instead Europe's future lies in giving a lead in other directions, and above all the fairer sharing of resources and the conservation of the planet, then a scenario based on economically sound autonomous areas may provide a better starting-point.

Nor should the political implications of differing patterns of economic activity be passed over in silence. Economic concentration and all-out competition imply gaps - and in most cases widening gaps. Prosperous and dynamic core areas, thirsty for the highly-qualified workers that the new technologies require, can co-exist with areas of decline and exodus, with peaks of unemployment and hardship, breeding grounds for frustration and discrimination.

In economic policy terms the core areas could be expected to dominate, through whatever institutions existed, and to impose the cautious, deflationary policies needed to win the upper hand in the competitive struggle. Again, there is a contrast with the more nuanced policies, giving preference to selective and non-destructive growth, that would correspond with the real interests of stable regional government.

In short, there lurks behind the issue of siting, and the resultant pattern of concentration, the broader issue of a centralist or a more genuinely federal European political system. But this goes far beyond the scope of the present study.

The options will of course never be clear cut. But the understanding and discussion of such fundamental choices would be facilitated if the factors examined briefly and superficially here, and others only mentioned, could form the object of thorough and quantified analysis. Then at least these fundamental issues would not go by default, but could begin to form part of the fundamental political debate for tomorrow's political Europe.

FOOTNOTES

Introduction

1.1.The European Commission's estimation of the economic impact of the removal of the remaining economic barriers between the Twelve is clearly set out in "The Economics of 1992", No 35 (March 1988) in the series "European Economy" published by the Directorate General for Economic and Financial Affairs.
(Hereafter "1992").

A popular re-write of the same text has been published in many languages. The English language version, entitled " 1992.The European Challenge. The Benefits of a Single Market" by Paolo Cecchini (English edition by John Robinson) is published by Wildwood House. (Hereafter "Cecchini")

For a critical assessment see "1992: Maggie's Market - an opposition view of 1992: the myths, the threats and the response", John LAMBERT, agenor No 99, Nov.1988, 36 pp.

2. Cf.MURRAY, Robin, "Regional Economic Policy in Europe in the 1990s in the light of the experience of the 1980s", report to the Commission of the European Communities, in the context of agenor Asbl's European Research Project on Autonomy. 74 pp.,April 1990.

Chapter 2

3.JUNNE Gerd, Re-regionalisierung: Chancen regionaler Reintegration von Produktion und Konsum als Folge der Entwicklung neuer Technologien.( Re-regionalisation: can new technologies allow production and consumption to be reintegrated at the regional level ? English translation by agenor Asbl.), in FRICKE Werner et al.(eds.) Jahrbuch Arbeit und Technik in Nordrhein-Westfalen, Bonn.Verlag Neue Gesellschaft, 1985 pp 337-347.

4.Ibid.

Chapter 3

5.MEYER, Eric, Des Régions déjà en 1993 ( "Regions already in 1993"), in the Feb.1990 issue of Grandes Lignes, p.28.

6.Ibid., p.29.

Chapter 4

7.KRUGMAN, Paul, "EFTA and 1992", Occasional Paper No 23, June 1988, from the secretariat of the European Free Trade Association (EFTA), p.11. (Available from the Economic Affairs Department, EFTA, 9-11 rue de Varembé, CH - 1211, Genève 20.

8.For a full record of joint ventures with eastern Europe, and informed comment, consult the various publications of "EAST-WEST",.46-48 rue Albert-Elizabeth, Bruxelles 1050.

9.Cf."La réunification de l'Allemagne et ses conséquences", (German reunification and its

consequences), in the March 1990 issue of "Conjoncture", monthly economic bulletin of Paribas. p.47.

10 Ibid.

11 Ibid. pp48-49

Chapter 5

12. Quoted by GILLESPIE, Andrew E. and others, in " Information and Communications Technology and Regional Development: an Information Economy Perspective", (p.90), in No 5, April 1989 of the STI Review (Science/ Technology/Industry), published by OECD. The source quoted for the figures is: OECD 1981 Information Activities, Electronics and Telecommunications Technologies Vol.1, ICCP Series No 6, Paris.

13. GILLESPIE and others Op.cit. p.99. The empirical evidence referred to is to be found mostly in a study undertaken by the same authors for the Commission of the European Communities on the regional impacts of information technology in Europe, and from a study on the supply and demand for telecommunications in a peripheral less favoured region of England.

14. Cf. also BROWN, Stephen, "Social and Public Service Aspects of Information and Telecommunications Technologies in Rural Areas", report for the Commission of the European Communities (DG XIII), in the context of the agenor Asbl's European Research Project on Autonomy.

15. GILLESPIE and others, Op.cit. p.88.

16. Ibid.

17. GLASMEIER A.K.," The Japanese Technopolis Programme", cited by Läpple (see Note 19).

18. STOHR W.B., Regional Policy, Technology Complexes and Research/Science Parks in "Informatics and Regional Development, Brookfield 1988, cited by Läpple (See Note 19)

19.LAEPPLE Dieter, "Neue Technologien in Räumlicher Perspektive" (New Technologies in Regional Perspective), in "Informationen zur Raumentwicklung" No 4 1989 pp 213-225, p 216

20. Much of the writing on this subject makes use of the terminology "Ford-ist" and "post-Fordist" (or in some cases "Taylor-ist" and "post-Taylor")."Ford-ist" designates the techniques of mass production carried to their extreme by the Ford motor company. Post-Fordist covers the new techniques referred to in this section. But this same terminology is not solely descriptive: it also reflects a political controversy between those left-wing economists and sociologists who see "post-Fordism" as a capitalist strategy to break down the power of the organised working class, at its strongest in the age of mass production, and those who see mass movement class politics as a thing of the past and "post-Fordism" as the chance for the labour movements to adopt new and more flexible strategies. Since this debate is not of direct relevance to the theme of this report, use of this loaded terminology has been avoided -whence also the need for a brief account of the process that has actually taken place. "

21. LAEPPLE Dieter, Op cit. p 218.

22. BIERTER Willy, "Mehr autonome Produktion - weniger globale Werkbänke" (More autonomous production - less global work-places), in Alternative Konzepte No 5, Karlsruhr 1986, p. 61.

23. LAEPPLE Dieter, Op.cit. p 222.

24. Ibid. The reference to Schiele is to: "Wettbewerbsfähigkeit durch industrielle Automation in der Fertigung" (Competitivity through industrial automation at the finishing stage), Frankfurt a.M. 1986.

25. Ibid.p.217
26. Ibid.
27. Ibid.
28. Ibid.

29 BIERTER Willy, Op. cit. p.99

30. LAURIER Jan and others, "Nieuwe Patronen in de Regio" (New Patterns in the Region), "Een studie naar de ruimtelijke gevolgen van ekonomische strukturveranderingen (RUGEON) (A study of the regional impact of structural economic changes), published by the Onderzoekscentrum Ruimtelijke Ontwikkeling en Volkshuisvesting (Research centre on regional development anbd housing), Leiden.July 1987. p.27.

31. BIERTER Willy, Op. cit. pp 96-8.

Chapter 6

32. "The Economics of 1992" Op. cit. p.21

33. Ibid.

34. CECCHINI Op.cit. p. 105.

35. MURRAY, Op.cit. provides a far fuller presentation of possible instruments,based on experience in the past decade.

36.BROWN Op.cit. provides a fuller exploration the issues arising over this point.

Chapter 8

37. Cf "Bedrijfinterne milieuzorg" (Environmental concern within the company), Notitie. Published by the Dutch ministry for Housing, Regional planning and Environmental protection, Van Alkemadelaan 85, 2597 AC's-Gravenhage

38. One of the awards in the European Commission's 1989 competition for good environmental management went to a paper-making company which by installing new plant had eliminated

pollution, drastically reduced its water consumption, and achieved a major cut in production costs.

39. Information based on discussions with responsible regional officials.

40. Phillips and Drew, a subsidiary of the Union of Swiss Banks, specialising in industrial consulting, has recently published "Investing in a green Europe", a guide based on an analysis of the impact of environmental measures adopted by the EC and by national authorities in western Europe. Quoted in La Nuova Ecologia", March 1990.

Chapter 10

40-a Junne op.cit.

Conclusions

41. Cf "Obstacles to the realisation of the energy potential of existent bio-mass sources in selected regions of the Community" (provisional title), report being prepared for the Commission of the European Communities (DG XII), by INESTENE ( Institute for the Study of Renewable Energy in Europe), Paris, in the framework of the study programme of the agenor Research Unit Asbl on the conditions for European autonomy.

42. ILLERIS Sven, "Counter-urbanization revisited: the new map of population distribution in central and north-western Europe", in Norsk geografisk Tidskrift, Vol 44, 1990. This study, though concentrating specifically on population trends rather than location of industry, confirms what has been suggested about new information technologies: namely, that because they have an "enabling" character and " make both big-city locations and remote rural locations possible for many activities,...distribution of population ... will primarily depend on the specific local coditions for economic activities ( for instance, the local availability of a qualified labour force)."

43. MURRAY, Robin, Op.cit.

44. An outspoken critique of the impact of economic integration on Ireland, in particular the emigration of young people who have been trained but can find no work, was made by the governor of the Bank of Ireland, Maurice F.Doyle, during the work of the committee of central bank governors chaired by EC Commission President Delors. His remarks, made behind closed doors, are reported in "Det Ny Europa"( The New Europe ), by Jens-Peter Bonde, published by the Folkebevaegelsen mod EF ( People's Movement against EC ) and the Rainbow Group in the European Parliament, 1989. p.37.

45.JUNNE Gerd, Op cit.

46.Cf. COSTELLO , Nicholas and others, "Beyond the Casino Ecoomy. Planning for the 1990s, Verso, London p.25. The authors point out "the paradoxical fact that as new technology allows shorter economic production runs and at the same time smaller concentrations of production workers in factories, the very same trends demand larger and larger firms for the research and development required for these technologies in the first place, and often increased total production of the wider range of product variants taken together".

# Social and Public Service Design of Information and Telecommunication Technologies

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