The West Midlands Region lies in the industrial heartland of the United Kingdom. It is a region built upon a legacy of manufacturing, most notably engineering and more especially the motor vehicle industry. The region is less well known for the manufacturing of clothing, an industry that plays an important role in the regional economy, not least in providing employment for significant numbers of traditionally marginalized workers. Clothing manufacture accounts for some 12,000 jobs with an annual turnover of £540 million. However, in recent years the industry has been in steep decline as clothing producers increasingly utilise offshore production in an effort to reduce costs. Yet relative to other higher profile sectors, the ‘mature’ clothing industry receives much less in the way of attention and support. Despite such difficulties, key stakeholders within the region are exerting considerable effort in an attempt to stem the tide. However, such efforts are largely locally, or sub-regionally, focused with a lack of co-ordination across the region. It is vitally important in the increasingly ‘regional’ agenda that the sectors’ interests are adequately served at the regional level.

Clothing manufacture in the West Midlands, particularly in the conurbation, is a relatively new feature of the regional economy. Firms emerged in inner-city Coventry, and the Sandwell/Birmingham borders as recently as the 1960s. The industry provided an opportunity for first generation immigrants from south-east Asia to establish businesses and provide work for family members and a small workforce. Start-up costs were low, premises were cheap and readily available. The industry prospered, growing rapidly to provide some 15,000 jobs by the early 1970s. During the following 25 years, the industry regionally outperformed that nationally, managing to maintain employment whilst some 190,000 jobs disappeared across the country. This tremendous resilience has been explained by two key factors. First, firms were able to compete on price terms by keeping wages low. Ethnic and familial links, and the dependency relationships which resulted from a lack of alternative employment, underpinned and sustained this position. Secondly, firms displayed considerable flexibility, although this was largely achieved through the casualisation of labour, rather than in the production process. The emergence of a largely ethnic minority-run sector helped considerably to stimulate economic development in inner-city areas, providing employment opportunities for marginalized workers and occupying what would otherwise be redundant premises.

Since the mid-1990s the resilience of the West Midlands clothing industry has been seriously challenged. Recent survey work in the region showed that the industry shrank by 24%, in turnover, between 1998 and 2000. This has led to significant job losses and company closures. The rapid emergence of low-cost producers in the Far East, and latterly Eastern Europe, in an increasingly global marketplace has eroded the ability of firms to compete on price. Well over two-thirds of companies surveyed referred to ‘cheap imports’ as the principal cause of decline. The majority of companies in the region are still producing low-value fashion goods, often on a cut-make-trim basis, for the domestic mass market. It is this area where price competition is most fierce. Prices are continually being driven down whilst unit costs increase. This problem is exacerbated as firms compete with each other to attract short-run, quick turnaround orders from suppliers who source the bulk of their work overseas. Companies have become entrenched in a low productivity environment, lacking the necessary funding for investment in design-led production or new technologies. Added to these difficulties, companies find it increasingly difficult to attract new recruits. That clothing suffers from a ‘sweatshop’ image, coupled with poor rates of pay, means that is unattractive to job seekers. In addition the workforce is ageing, averaging in the mid-to-late 40’s. As workers retire key skills are vanishing.
Strategic assistance is vital if the industry is to survive. The plight of the industry nationally is well profiled in the Textile and Clothing Strategy Group’s ‘National Strategy’ document. Yet regionally, only one Regional Development Agency, the Department of Trade and Industry funding, explicitly identifies clothing as a key sector in the context of increasing competitiveness and supporting business growth. Given that regeneration funding generally, and Department of Trade and Industry funding for the sector, is channelled through the Regions, this omission is a major concern in the West Midlands. Moreover, the clothing industry is similarly over-looked in the Region’s current Single Programming Document, meaning that accessing European funding will become increasingly difficult.

Despite such setbacks, considerable work has been undertaken to support the industry within the region, although this has largely been done on a sub-regional basis, with some degree of duplication. For example, individual clothing resource centres/bureaux in Coventry, Wolverhampton and Birmingham have been able to access regional funds, to provide shared CAD/CAM facilities, and to support the employment of clothing advisors and technicians to work with local firms. Clothing advisors are particularly important in encouraging and helping firms to move into higher-value, design-led production, to diversify into new markets, or to simply manage decline. Funding has also been accessed to support initiatives such as the Clothing Manufacturers Charter, which has been highly successful in Coventry and Wolverhampton in helping to raise workplace conditions and standards in the industry, and ultimately help firms win new orders. Courses have been run through local Universities to help companies with marketing. What has been achieved is notable, given the barriers faced. However, much more needs to be done. The lack of visibility of the industry, coupled with a lack of co-ordination of effort, contributed to the industry being largely overlooked in regional strategies in the first place. The increasing move towards regional forms of government will require a much more co-ordinated approach to support the industry across the region and avoid duplication of effort. To this end the call to establish a regional Clothing Sector Forum ‘to represent the industry and liaise with government and business support agencies for the benefit of members and the industry in general’ is a major step in the right direction.

**SPATIAL EVOLUTION OF INDUSTRIES**

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Evolutionary theory provides a great challenge for the analysis of the evolution of industries in space. In recent years, quite some progress has been made in applying evolutionary economics in this field of research. The paper presents different models that have described the spatial formation of new industries as an evolutionary process. In this way, we set out a new research agenda with respect to one of the main topics in economic geography, in which we believe evolutionary thinking provides new promising insights.

The paper begins with setting out some models developed by Brian Arthur (1994). He was one of the first to make explicit use of the notion of increasing returns to determine the role of chance versus necessity in the spatial pattern of industries. We elaborate on two interesting models, that is, a spin-off model and an agglomeration model. Both models describe a mechanism that ‘organises’ the initial chaos of locational behaviour into a pattern of spatial concentration. However, the models differ because different evolutionary mechanisms are held responsible for the spatial clustering of a sector in time.

The spin-off model explains the spatial formation of an industry purely from a chance process of firms giving birth to spin-offs. This spin-off process has been observed as a major feature of the growth of high-tech areas like Silicon Valley. The spin-off process is regarded as a purely localized phenomenon: it reflects an evolutionary mechanism of knowledge transfer between parent and spin-off, while it encourages spatial clustering of new firms (a stylised fact in empirical research, though not explained by the model itself). Chance is involved because of the random sequence of new spin-offs. After many spin-offs, however, the spatial pattern becomes stable and settles down.

The agglomeration model explains how the spatial pattern of a new industry may be determined by chance (small, arbitrary events) and agglomeration economies (increasing returns due to clustering of firms). Firms do not emerge out of existing firms. Each firm has a natural preference for one region, and these locational preferences are formed independently from other firms. If the locational preferences are uniformly distributed, chance rather than necessity determines which region will take an early lead. After a critical mass of firms is established in the leading region, agglomeration economies come into being. The leading region becomes more attractive for new firms to locate there, even if they have other locational preferences.

Alternative models have been developed. For example, Klepper has extended the spin-off model. In his model, a region that at an early stage has generated (by chance) more successful firms is expected to produce more and more successful spin-offs. Since the probability of spin-offs is dependent on the size of the parent, successful firms will produce more spin-offs. Moreover, spin-offs of successful firms inherit a large part of the successful routines of their parents, while spin-offs of less successful firms inherit a large part of less successful routines (DNA). This latter reasoning is regarded as a purely evolutionary process: knowledge creation occurs and remains within the boundaries of firms (tacit knowledge and routines), while it is reproduced through the growth of the firm involved and through its giving birth to new spin-offs.

We believe there is much room for improvement and refinement of these models. We will present such a model, which elaborates on the WLO-model (Boschma, 1997). It accounts for the role of agglomeration economies that is missing in the models of Klepper. Moreover, contrary to the models by Arthur, it takes into account the fact that new firms do not yet have highly specific locational demands. It excludes the possibility that regions are being able to meet these specific demands instantly. The WLO-model states that the spatial formation of new industries should be explained in terms of chance and human agency. In this respect, the model is much more interested in how new industries solve their own problems, and how regions may influence their capacity to do so.

If empirical results of a study on the spatial evolution of the software industry in the Netherlands are available at the time of the conference, we will present them. In this research, we devote special attention to the question which of the mechanisms discussed above (spin-offs, agglomeration economies, human agency) have contributed most to the spatial pattern of software developing in the Netherlands.
NEO-LIBERAL URBANISM: REFLECTIONS ON THE POST-CRISIS METROPOLITAN RESTRUCTURING OF SEOUL, KOREA

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This paper attempts to capture the political economy of neo-liberal metropolitan restructuring in East Asian cities. Confronting the force of globalisation, most leading East Asian cities have undergone sweeping political economic restructuring in a way to enable to compete with global market players. In so doing, neo-liberalism, a revived liberal marketism, has been inscribed into the ways in which these cities are governed and operate. For some East Asian cities like Seoul, neo-liberalism came into being through the 1997-8 financial crisis, with its deep effect on the post-crisis restructuring of Seoul metropolis. The paper is divided into six sections. After Introduction, the second section examines the course in which the forces of globalisation are translated into the dynamic changes of cities in the East Asian context. The third analyses the details of post-crisis restructuring in the areas of infrastructure, land use, industrial economy, employment, institutions, etc.. The fourth tries to reveal the neo-liberal features of urban life in “the glurbanizing Seoul” which are manifested with the liberalization, marketization, virtualisation and destituation of urban daily life. The fifth looks at behind the neoliberal urbanism by making a critical review on recent two urban spectacles: Seoul's World Cup Game and the Conservative Party’s overwhelming victory in the 2002 local election. The last is on Conclusion.

Biography

FOREIGN INVESTMENT, EMBEDDEDNESS AND SPECIALISATION IN SOUTHERN PERIFERAL REGIONS: THE ANDALUSIAN CASE
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Andalusia is a big region in the south of Spain that represents approximately the 18% of Spanish territory and population. Andalusia has historically been a poor region in the Spanish context. The traditional Andalusian specialization was, still, in the fifties, agriculture. But in the sixties, a process of structural transformation has been opened. Manufacture industries were considered essentials in this structural transformations. Very non – embedded manufactures were installed in the region. The consequence was a dual manufacturing sector, with some non – embedded big enterprises with high levels of capital accumulation in one hand. And in the other hand, local capital based, small and medium endogenous enterprises with lowers levels of capital accumulation. But the situation was not so dual. There also were some local based big manufacturing industries with high level of capital accumulation over all, in agro – food manufactures. These elements constitute the structural characteristics of the Andalusian Manufacturing sector.

Since 1980, the process of Restructuring has not meant a radical change in industrial specialisation. The relation between different manufacturing industries is approximately the same today as 20 years ago. But in general, the productive structure has experienced a strong process of terciarisation. Service industries have gained relevance in Andalusian productive structure. One of the reasons of this growth has been the development of tourism, the use of the services like refugee sector etc.

The embeddedness of manufacturing sector has experienced some changes in the last years. The traditionally embedded activities have reduced their levels of relations with local suppliers. Foreign investment explains partially this tendency. The traditionally non – embedded activities have increased their acquisition to local enterprises. But in general the manufacturing industry has reduced his articulation with the overall regional economy.

The aim of this article is to explore these arguments and to summarize the evolution of these elements.

ECO-INDUSTRIAL DEVELOPMENT AND REGIONAL RESTRUCTURING: INDUSTRIAL ECOLOGY OR MARKETING TOOL?
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Since the Earth Summit of 1992 ‘sustainable economic development’ has become a mainstream mantra. The aim of sustainable economic development is to enable the continuation of economic growth, but limit its environmental and social impacts by attempting to integrate all three themes into policy initiatives. This has been reflected in policies at all scales from local to international. Over the last decade interest has grown in industrial ecology as one potential means by which to make industry more sustainable. Industrial ecology attempts to move beyond the ‘greening’ measures traditionally applied at the level of the firm (e.g., energy and waste audits) to re-conceive firms as occupying a niche in a network, analogous to the food chain in a natural ecosystem. Thus, for example one company’s by-products can serve as another company’s ‘raw materials’, thereby minimising resource use and waste production for the network as a whole. One practical outcome from this work on industrial ecology has been the development of an eco-industrial park movement. Some 50 to 60 locations worldwide are attempting, or have attempted, to establish clusters of businesses following, to varying degrees, the principles of industrial ecology. In essence, eco-industrial developments seek to create jobs and increase business competitiveness by reducing waste and pollution.

Whereas much previous work on eco-industrial parks has taken a technical and/or prescriptive perspective, this paper seeks to investigate the phenomenon in the context of the debates surrounding regional restructuring and economic development. In this light, the designation of an industrial development as an eco-industrial park may be no more than an attempt at regional differentiation, i.e., a marketing exercise in the competition for private investment. At the other extreme, an eco-industrial park may be a component in a comprehensively environmental development strategy.

Our research to date has involved interviewing eco-industrial park developers, managers, participating businesses and others associated with both operational and planned North American eco-industrial parks. We examine the types of communities that are developing eco-industrial parks; the extent to which eco-industrial parks are part of a broader economic development
initiative; whether in fact they are typically public sector-led developments; and compare the priority given to the three components of sustainable development between parks. We have found that in practice, eco-industrial ideals are often compromised; parks pursue disparate strategies to overcome differing obstacles to economic development.

**Restructuring the Automotive Industry in the English Midlands Regions**

*Tom Donnelly, David Morris and Sally Barnes, Motor Industry Observatory, Coventry Business School, England*

The English Midlands are currently undergoing a slow but painful economic transformation. The prime objective of this paper is to investigate how this can be achieved. There is a strong body of opinion that this can be best effected by the reverse of the process of rationalisation plant closures and leaving the volume end of the trade to firms in emerging regions, as is the case in the auto industry alone. It will be effected more successfully under the umbrella of regional bodies such as Advantage West Midlands and the Learning and Skills Council both of which are working currently with the Rover Task Force to raise local skill levels. It is appreciated that not all firms will survive as automotive components sub-assemblers and suppliers. Indeed, part of the current effort is targeted at encouraging some firms to diversify into other technologies such as medical instrumentation, leisure products, assisted living devices and mass transit systems and so lessen regional dependency on too narrow an industrial base.

Since the early 1990s there has been a concerted effort to reverse the trend described above and it is the main purpose of this paper is to explore how this can be achieved. There is a strong body of opinion that this can be best effected by the reverse of the process of rationalisation plant closures and leaving the volume end of the trade to firms in emerging regions, as is the case in the auto industry alone. It will be effected more successfully under the umbrella of regional bodies such as Advantage West Midlands and the Learning and Skills Council both of which are working currently with the Rover Task Force to raise local skill levels. It is appreciated that not all firms will survive as automotive components sub-assemblers and suppliers. Indeed, part of the current effort is targeted at encouraging some firms to diversify into other technologies such as medical instrumentation, leisure products, assisted living devices and mass transit systems and so lessen regional dependency on too narrow an industrial base.

**Old Industries versus High Technology Activities in France?**

*Jacques Fache, Nantes Institute of Geography and Territory Planning, France*

As in other European countries, French old industrial regions have problems to turned over their economy and society. One of the most important difficulty is the strategy of firms. They avoid territories which are yet industrialized. It means that instead of observing links between generations of activities, we see that new activities and specially high technology activities, are developing themselves in under industrialized territories, avoiding industries which were born in the previous industrial cycles. They look for new skills, new employees, new regional environments. Sometimes it is very difficult to chain different industrial or economical cycles. For the oldest industrial regions, the situation is worse than in other cases. The very high specialization in low skilled employment, the lack of high-level schools or universities, the environment problems push away all activities dealing with knowledge economy, high tech industries, services and innovation. The aim of this paper will be to measure the real impact of all these difficulties, trying to see if territory policies as creating universities or technologic parks in regions knowing crisis are successful ten or twenty years after being created. Is it possible to observe changes in economic geography of these regions? Three stages will be treated.

The first point will be the study of the location of high technology services: software and consulting in data processing. This type of activity is a good indicator of metropolitan levels in urban network. These activities are diffusing and spreading in space quite regularly. The question is to know if the urban network in old industrial regions has the ability to receive such activities, very different from the traditional economic basis. Is the old social and economical structure an obstacle to these processes?

The second point concerns more precisely a type of high technology services: software and consulting in data processing. This type of activity is a good indicator of metropolitan levels in urban network. These activities are diffusing and spreading in space quite regularly. The question is to know if the urban network in old industrial regions has the ability to receive such activities, very different from the traditional economic basis. Is the old social and economical structure an obstacle to these processes?

The third point deals with territory management policies. The question of sustainable development is the most important for these territories, and they try to start up new cycles for products, innovations, industries. But starting up a technological park for example is very difficult. Everything depends on the human resources located on the site or coming from others metropolitan areas. After more than twenty years of action, it is possible to observe changes and to know if high technology backwardness depends on circumstances or shows us structural problems.
The paper addresses the question whether regional policy can fundamentally change regional development paths for the case of Baden-Württemberg and its central region Stuttgart/Mittlerer Neckar. This is a region characterized by so called mature industries but also outstanding economic prosperity. In the first half of the nineties the imminent decline of the region was expected. Nowadays the region is again on top. Has policy played an important role in this development?

It continues to be a matter for heated debate about the extent to which regions can diverge from established paths of economic development. There are potent arguments that any new constitution of regional economies is determined to a considerable degree by institutional and industrial structures that have emerged in the course of regional industrialization history. Innovations, transfers, and adaptations of knowledge, technology, institutional structures, learning systems and policy mechanisms, however, are ever-persistent change factors that promise fresh opportunities for regions to pursue new development trajectories. At the same time, change may expose limitations to adaptation within regions, presenting challenges of industrial restructuring, regional crisis, continued regional lag, or the inability to capitalize on apparent new opportunities – caused, at least in part, by deep-rooted economic, social, or political traditions that constrain adjustment and development.

In considering how to frame and understand contemporary regional development, we begin with the assumption that there are not only technological but also regional trajectories. Technological knowledge is also organized in regional economic areas. And this knowledge incorporated in regional production clusters, cooperative relations, institutions and policy patterns does not usually develop in great leaps and bounds, but incrementally, step by step, in a mostly evolutionary manner.

We further suggest that regionally developed “assets”, that may be embedded in densely woven networks of interactive and exchange relationships, must be comprehended as the key to understanding regional problems and regional capacity for action. But, to what extent does this imply that the future development of every region is “prestructured” by the technological, economical, cultural, political and social history that underpins it current array of assets? If prestructuring is not complete, what then are the dimensions of the “space” for the policy-induced reorganization and development of regional technological capabilities? And, if the development of regions is not only influenced by technological, but also by institutional path dependencies, how can we operationalize and integrate these concepts to inform policy development?

We believe that it is helpful here to recall the concept of “institutional thickness”. It reminds us of the following aspects: First, the staying power of institutions is of considerable significance in regional development. Second, the local construction and enrichment of a reservoir of shared knowledge is a notable element of regional dynamics. Third, the capacity for learning and change is inherent to institutional flexibility. Fourth, the innovative capacity of companies is viewed as a shared characteristic of a given region. Fifth, regional interactions are firmly based on trust and reciprocity. Finally, regions give rise to a consolidated feeling of belonging among their inhabitants, reinforcing regional social capital. Particularly in innovation research, which tends to concentrate on industrial and technological changes, the importance of the region as a collective sphere of economic activities, institutional and social relationships, and political negotiations cannot be underestimated.

Given this, how can we deal with the challenges involved in reforming and developing regions and their industrial, innovation, learning, and institutional systems? We start with the following hypotheses within the context of this paper:

First: The economic position of a region within the context of global competition is partly the result of path-dependent developments; it is also influenced by the institutionally anchored governance structures that influence the regional innovation capacity. As institutional thickness increases and gives rise to institutional inertia, the industrial development paths of a region also becomes institutionally stabilized; technological path dependencies are thus accompanied by institutional ones.

Second: One means of increasing regional innovative capacity is by strengthening, re-orientating, or creating institutions. Even if accomplished, this often proves an inadequate solution, however. It often proves difficult to develop a new regional identity and the generation of synergy effects between institutional and technological development paths. This is the task facing especially those regions which have been very successful up to now, and which have achieved a high level of technological competence in the so-called mature industrial sectors. For these regions, the hitherto established institutions and the institutional thickness thus achieved can even become an additional problem, since training, research and funding facilities tend to stabilize the traditional patterns of industrial development.

Third: Research findings reveal interrelationships between technical and industrial development paths and regional institutions. This means that technical innovations usually need to be accompanied by institutional innovations. In some cases, institutional innovations – such as initiatives for establishing and facilitating regional innovation networks – may be necessary preconditions for further technical innovations.

Fourth: Reflexive practice at the regional level is a crucial tool in giving orientation to regional development.

In the proposed paper the case of Stuttgart/mittlerer Neckar will be analysed and we will try to show whether such policy practice has led to desired results, with the lesson being not necessarily that other regions should pursue the same policy mechanisms but that regions require and should develop customized policies that reflect their conditions and opportunities for development.
The paragraphs of the paper will be the following:

- local development and territory: the emergence of local productive systems
- Rise and decline of industrial districts: from the phase of great development to the selection among firms within the districts
- Competitive factors and the international position of Italian industrial districts. A comparative analysis at European level
- Transformation processes and alternative paths of restructuring: a typology of industrial districts restructuring
- The internationalisation of district firms and the challenges of global competition
- The governance of transformation processes in industrial districts and the role of collective entrepreneurship

References

Becattini G. (1998), Distretti industriali e made in Italy, Bollati Boringhieri, Torino
Brusco S. (1989), Piccole imprese e distretti industriali, Rosenberg & Sellier, Torino

REBUILDING LOCAL GOVERNANCE IN POST-COMMUNIST ECONOMIES: A RADICAL INSTITUTIONALIST ANALYSIS

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In 1990 the regions of Central and Eastern Europe were simply local organs of national government, and rebuilding local governance has been seen as a central task of the transformation process. Evolutionary accounts have been associated with schools of thought that see a resurgence of regional economies, local networks and endogenous development processes owing their renewed importance to innovation, local linkages local and exchanges of information. This paradigm has been drawn on in the context of transforming communist economies by those that have argued that rebuilding the regions should come from below. It is suggested that in order to be more adaptive diversity can be exploited in order to turn the specificity of regions into assets for economic development. Others have emphasized the notion of systemic vacuum, that is the lack of a stable configuration of political and economic agents at a national and local level. At the heart of this strategy is the notion of restructuring with the participation of the state where institutions are created which are complementary to the market mechanism and administrative coordination while ensuring social control over these mechanisms.

This papers argues that the main strength of the evolutionary perspective is that it is able to map the way in which social change at all spatial levels is incremental and divergent because of deeply inherited economic and social relations. However, there are several shortcomings in this approach which centre on endogenous processes to the exclusion of the wider institutional, economic and political framework in which they unfold. Further, while the evolutionary school of thought advocates the saliency of informal institutions in economic processes, asymmetrical power and differentiated interests are largely eviscerated from their accounts. In particular this paper emphasizes contesting and divergent interest as shaping the emerging the local institutional landscape in transforming economies in a process of cumulative causation.

The first part of the paper looks at the process of reinventing and reconstructing governance in the Wroclaw regional economy in Poland. It examines the emerging base of formal institutions, but looks at barriers to constructing coherence, congruity in the context of enduring networks that are carried over from the past, and emerging new interests. The second part of the paper focuses on path shapers, those agents of change who are forging the new institutional landscape. First, the nomenclature is seen as having reorganized social capital in local power bases such as SOEs and local government to influence the restructuring of the economy. Second, this account identifies Solidarity and organised workers as a potentially powerful group, for cooperating with or contesting change, particularly in some of the larger firms with traditions of worker participation. Finally imported institutions from western Europe and America have been influential in terms of introducing new ways of thinking about economic behaviour in the workplace and the wider locality thought to be consistent with the demands of the market.
The present techno-economic paradigm emphasises collective learning processes in generating innovations. Information is said to be the most important production factor and learning the most important process in today’s world. At the regional level, a lot of focus has been put on regional innovation systems or regional milieus, where different kinds of actors are involved in innovative processes, profiting from the emerging externalities during the co-operation. Innovative milieu consists typically of different innovation networks based on some common theme. These networks aim to increase innovative capacity of the whole milieu.

In this paper the so-called Regional Development Platform Method is presented as a network leadership tool for exploring and exploiting core competencies in a region. A regional development platform is a concept understood as a platform that is often industry or expertise based and presents the business potential of the actors working for the platform. The actors of a regional development platform are firms, technology centres, expertise centres, research centres, educational organisations, etc. contributing to the defined development platform. A regional development platform must be separately defined each time it is utilised.

The Regional Development Platform Method consists of seven phases. The first five phases of regional development analysis seek to find the most potential business possibilities in a region. Phase six defines the form of the regional innovation system, which can be used as a framework for structural development of the innovation system. But how can the development network get organised to exploit the most potential possibilities in a region in practice?

The core process method (phase 7) tries to give an answer to that question. As part of the regional innovation system, core processes (innovation networks) should be formed, based on regional core competencies found by the regional development method. In these processes, the regional actors are grouped to exploit some defined business potential. The defined group forms a network functioning according to the rules of learning economy. The core process method can be seen especially as an operational tool of network leadership.

In this study one core process in the innovation system of Lahti region, Finland, is defined. “The age business core process” is used as a case example. This process is widely seen to contain potential business possibilities for the region. The main components of the definition process are

- definition of characteristics of “age business”,
- evaluation of the potential of age business in the region,
- definition of the main actors of the core process,
- designing the form of the core process and
- starting the function of the core process.

In this article the definition process is described and the experiences of the process evaluated.
We describe the CPG, trace its development, and analyse the processes of restructuring that underpin its focus and operation. From an analysis of similar structures in other parts of the world and regional development best-practice principles we identify a number of dimensions that can be used to describe organizations that are established to facilitate intra-regional cooperation. Using these, we describe the CPG model and compare it with other similar organizations.

In the paper, we present a set of key process performance indicators for such organizations, which were developed during the study, and use these to evaluate the CPG as an example of best practice in intra-regional cooperation. We found that the CPG model is unique and that it is, indeed, an instance of best practice.

We also provide answers to the question: “What can other similar regions learn from the experience of establishing the Upper Spencer Gulf Common Purpose Group?”

The general conclusion is that the CPG model, or elements of it, should be seriously considered for adoption by other similar regions interested in developing a cooperative structure, with appropriate modification according to various contextual factors.

The 'Oulu Phenomenon' though successful in helping transform the local industrial structure has been beneficial to the region. Outwards migration to the south of Finland has been slowed down. However, economic success has created a two tier labour market. There is that for highly qualified technologists and engineers, but those without such qualifications still encounter difficulties in finding work other than in service industries, which have expanded in recent years. The unemployment rate though remains stubborn and runs currently at 14 per cent. How this will be tackled in the future remains debateable.

Located in the Ostrobothnia region of Finland, the city of Oulu has experienced a technological transformation over the past thirty years or so. In the decades immediately after the Second World War the local economy, based on wood processing, chemical and steel industries, agriculture and forestry, declined and the city’s economy entered a period of relative decline and increase in unemployment. Since then, this decline has been reversed and the ‘Oulu Phenomenon’ has become a staple of conversation in the Nordic countries. This is based very much on the growth of new technology based industries located mainly in two technology parks, Technopolis and Medipolis. This development has helped transform Oulu into the High Tech capital of the European far north. While Technopolis concentrates mainly on ICT, Medipolis focuses on high tech applications in biotechnology, medical instrumentation and welfare.

The purpose of this paper, which draws comparisons with other technology centres in Europe such as Cambridge, is firstly to explore the dynamics that led to the successful creation of both Technopolis and Medipolis. Fundamental to the emergence of this technology cluster is the role played by academic institutions and local authorities who acted as catalysts in this process. Secondly, and more importantly, it seeks to explore the diverse social relationships that exist among local enterprises and between enterprises and higher education and research institutes.

Fundamental to the success of new technology based industries has been the use of shared learning to bring the university and the business communities into a relationship in which theoretical and experiential learning feed off one another. Also important has been the role of management training for engineers and other technology specialists through the creation of a specialist executive MBA programme at Oulu University. Similarly, doctoral students pursue projects applicable to or sponsored by industry and spend much of their study periods in firms. Equally, there has been considerable value in the creation of the Northern Lights group, a voluntary ‘study circle’ of local officials, academics and businessmen, who meet on a regular basis to pursue common interests. Much of this is predicated on the need both to cooperate and to compete in the pursuit of business success.

Of the two parks in Oulu, Technopolis has been the more successful and attempts are currently being made to create a series of small technology parks, called ‘Micropolis,’ in other parts of Northern Finland at places such as Rovaniemi, Kemi-Tornio and Raahre as part of an active regional policy to arrest rural depopulation and to encourage younger people to return to their native areas once their academic training has been completed.

The authors have been involved in a series of “action research”, being part of processes aimed at improving regional competitiveness. In such processes local and central government, as well as local and regional industry, has important roles to play.

However, social scientists are connected to those processes with a mixture of expectations from both government, industry and academia. Sometimes they are hired as evaluators of programmes, sometimes as researchers making science and maybe reporting findings and sometimes the contract and expectations are mixed or elaborated in the evaluation of work. Obviously, practitioners as well as academia seem to believe in the usefulness of social scientists. On the one hand, practitioners are striving to practical goals and tend to believe in social scientist usefulness in the sense that they can in fact help to improve what is made, e.g. “mirroring” the process, giving constructive comments that can change action, being the critical eye etc. On the other hand, social scientists live in another world of logics, where contributing to academic debate and general knowledge production is a first.

We claim that there is a hidden agenda behind participation of social researchers in regional restructuring processes. This hidden agenda is creating confusion both among practitioners and researchers and ought to be debated in open. Furthermore,
we propose that a new way of regarding society as knowledge based and learning as a “mode 2” interactive process is not a solution to the problem.

Empirically we base our paper mainly on regional studies in West Sweden. Theoretically our point of departure will be theories and concepts about the role of university in contemporary society, e.g. “informational society” (Castells, 1996), “learning economy (OECD, 1996) and “mode 2” (Gibbons et al, 1994)

WHEN CONSENSUS IS NOT ENOUGH: THE CAMBRIDGE (UK) HIGH-TECH ECONOMY AND ITS REGIONAL AND NATIONAL CONTEXT

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The uneven development of new industrial spaces is creating a series of challenges for existing modes of governance. While central and local governments are keen to capture the benefits of these ‘hotbeds of innovation’, special measures are often required to keep with the demands they place on land, infrastructure and property. Although local firms and other pro-growth interests invariably look to government to provide the requisite economic and social infrastructure, the state clearly faces its own fiscal, legitimacy and ideological pressures in balancing the needs of these rapidly growing areas with the competing claims of existing residents or less privileged areas.

This paper examines the pressures arising from the rapid growth of the Cambridge high-tech economy and explores various attempts by state and non-state actors to overcome barriers to further growth within existing and proposed frameworks for territorial management. We argue for instance that while the Sub-Region’s post-war ‘spatial fix’ of selective growth constraint helped to nurture high-tech clusters, by the mid-1990s rapid growth meant that attempts to disperse growth in Cambridge had become increasingly unsustainable for local business, residents and politicians. In order to circumvent increasing conflict over development within the Cambridge area, local pro-growth organisations have lobbied to change regional and national planning and governance frameworks. Part of this involves a redefinition of the spatial scale and scope of governance for the ‘Cambridge Phenomenon’ in order to leverage the requisite institutional and fiscal resources to support the sustainable development of the sub-region.

Having reviewed the first stages in ‘unblocking’ Cambridge at the Regional Studies Association International Conference in Gdansk, we look more closely at the political struggles that have emerged as this ‘successful’ area seeks to adapt to regional change. These include local conflicts over the nature and scale of ‘growth’ that is required, but increasingly the focus is shifting to central-local relations as a powerful Cambridge growth regime seeks to persuade central government to provide the special financial and institutional support felt necessary to sustain the Cambridge Phenomenon. The paper therefore raises a series of issues not only about the embeddness of Cambridge’s high-tech economy at different scales of territoriality, but also about the ability of nationally important city-regions to detach themselves from regional or national modes of regulation. As such we reiterate the need for stronger empirical and conceptual linkages between the analysis of new industrial spaces and that of their associated spaces of governance.

INCREASING REGIONAL SPECIALIZATION AND DIVIDE – INDUSTRIAL TRAJECTORIES OF SHIPYARDS AND RELATED INDUSTRIES IN TWO NORWEGIAN REGIONS

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The debate on industrial districts and clusters indicates processes of regional specialization relying on territorially embedded knowledge and networking SMEs. Within the tradition of evolutionary economics, literature on ‘industrial trajectories’ and ‘path dependency’ recognizes the role of history. Literature on ‘lock-in’ stresses the balance between local and extra-local sources of information and ideas, when it comes to industrial renewal and innovation. Inspired by evolutionary economics this paper examines how regional firms adjust over time. In these regards key linkages and networks are considered as channels of knowledge exchange and interactive learning. The research questions are:

- To what extent have there been an increasing regional specialization and divide?
- How could the different industrial trajectories be explained?

The empirical material is based on a Norwegian 'cluster'-study of maritime industries. The maritime cluster consists of shipyards, ship owners, suppliers of maritime equipment and related producer services. These actors are often customers and suppliers of each other. In the perspective of interactive learning and innovation, the relations between ‘users’ and ‘producers’ are regarded as important. This paper puts particular focus on the relation between shipyards as ‘producers’ and ship owners as ‘users’.

The paper compares two maritime regions with regard to maritime industries: the Northern and the Northwestern parts of the country. There are some striking differences regarding their industrial trajectories. Traditionally most of the shipyards at the Norwegian coast have combined and shifted between shipbuilding and maintenance of the fleet with regard to market fluctuations. Nowadays the shipyards in the North, mainly maintains and repairs the regional fleet. The shipyards in the Northwest however, build and construct ships both for regional, national and international markets.

Even though maintenance and shipbuilding take place within the same industrial branch, the two industrial activities differ considerably. The former activities are more basic and are rather based on practical knowledge and experience than formal competences. Shipyards in the business of maintenance, tend to cultivate their relations to a limited number of ship owners. As the ship owner also is liable to prefer easy access, there is less price competition in the market of maintenance and the profits could be quite good. The latter activity is more demanding regarding capital, finances, equipment, administration, formal competences (engineering and design) and co-ordination of the value chain (coping with suppliers from low cost countries etc.). An industrial milieu of shipbuilding and related industries, has to rely on complex industrial networks consisting of local as
well as extra-local industrial linkages. Shipbuilding competes on international markets, and the margins of profit are limited. As this industrial activity has become demanding, it is hard to combine or periodically shift between maintenance and shipbuilding.

The industrial specialization in the two regions appears as a reinforced and irreversible process. The shipyards in the North, however, is more fragmented in this regard, but there exist some strong linkages mostly at the local level. The paper concludes that the strength of industrial linkages, the complexity and spatial formation of networks explain the industrial trajectories within regions.

THE EXPERIENCES OF THE Restructuring IN THE NORTH-EASTERN REGION OF HUNGARY FROM THE LATE 80s TO OUR DAYS

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The economic and social changes ensued after the change of regime caused serious problems in the North-Eastern Region. As the most people in the Borsod-Abajú-Zemplén (BAZ) county (the North-Eastern region consists of three counties: BAZ, Heves, Nógrád) were employed in the industry, the reduction of the great traditions possessing industrial sectors (mining, metallurgy, mechanical engineering) leaded to mass unemployment.

In 1990, BAZ county gave the total ethylene, propylene and PVC production and more than half of the pig-iron and the steel output. In addition one third of the complete, the national PVC production and more than half of the pig-iron and the steel output. In addition one third of the complete, the national PVC production and more than half of the pig-iron and the steel output.

By 1993 it became clear, that the governmental interventions, which were applied in BAZ county in the field of economic, structural and regional crisis management from the mid-80s remained ineffective. According to the 2. component (forming of the decentralized decision-maker and organizational system) of the PHARE Tentative Regional Development Program, BAZ (together with Szabolcs-Szatmár-Bereg county) county was marked as a test-area.

The governmental decision was born on the base of the earlier experiences, like: the studies of the called Integrated Restructuring Action of the Steel-industrial Regions, which was worked out in the frame of a PHARE program or the experiences of the PHARE Tentative Program between 1993 and 1996 (this program’s result was the setting up of the County Development Public Trust). The requirements of the decision were as follows: the complex managing of the problems; basing on the local initiative; standing in conformity with priorities and principles of the European Union; adding integrated sources to integrated aims.

In 1995, a governmental decision separated from the state expenditure 2 billion forints (8 million euros) for the emphasized improvement of the county. However it did not mean the decentralization, because the decisions were not made in the region, but in the ministry. The Advisory Board of the County Development Public Trust had only the right of assessment.

The integrated program wished to create a framework to increase the economic potency of the county in long-term. The aims of this work were the followings: support the entrepreneurs in the mental-professional preparing; improve their conduct of business; increase capital and better their initiative.

The program determined the aim and priority-system of the development in the medium-term (1995-1998).

The program contained six main goals:
- Economic restructuring (transforming the structure of branch, product, capital and company);
- Bettering the conditions of companies’ growth and competitiveness (development of financial and informational services, entrepreneurs’ infrastructure and the workforce);
- Creation of employment;
- Developing the absorptivity (effective participation of the external sources and the setting up of the institutional frame);
- Improving the environmental quality (improvement of the external connections and the accessibility of the county, enforcement of the viewpoint of the environmental protection in all programmes);
- Strengthening the social-economic cohesion in the county (moderation of the regional differences, helping the social strata lagging behind).

The integrated restructuring and crisis management program undertook the prevention of the total economical collapse and put down the elements of the transformation. The greatest value of the program is that the county remained standing in spite of the shock-effected crisis. The realization of the program set positive progressions in action, like: established the fundamental institutional of market economy; brought different funds to the enterprises. In spite of these steps the program could not make a change in the disadvantageous position of the county.

One of the significant results of the program is, that the three-year competition system strengthened the capability for sending an application, made clear the conditions, how the entrepreneurs can reach the public funds. The applicants become more prepared for joining similar european programs, what can mean advantage for them after Hungary becomes a member of the European Union.

The actual conception means a „development-closing up” program and its centre the effective and dynamic improvement of the human resources can be found.

In the field of economy stimulation and restructuring is very important to help the inflow of the foreign direct investment and better the framework of the firms’ settling, with special regard with the large and medium-sized enterprises, which can fill the integrating function in the economy.

The creation of strong medium-sized enterprises level is a substantial task to compensate the dominance of the on prosperity highly depending chemical industry. In addition the medium-sized enterprises are expected to connect with the foreign multinational companies, which bring advanced technology in the county and increase the employment.
From the point of view of the development of the region the strengthening of the innovative and renewal capacity is essential. For this reason innovation oriented technical and technological change is needed. The main standpoints are as followings: the enlargement of the incubation program; the increasing the number of the incubator-houses and the setting up a database to help this work.

In the interest of closing up of the county the improvement of the transportation and carriage infrastructure has to play a keyrole. It means, that the „M3” motorway should reach Miskolc, the centre of the region as soon as possible.

By reason of the strengthening of the county’s economic position and the acceleration of the closing up process it would be important in to the accession remaining time to creat and make work decentralized financial supports for the county.

To the training of the EU experts have to be paid a special attention with emphasized regard with the acquisition of satisfactory language-knowledge.

By the accession with high-level knowledge has to be known about the conditions of allocation of sources from the Cohesion and Structural Funds. The capacity of the participants in the market has to be improved, the participants have to be prepared for the reception of the assistances.

BUILDING INNOVATION CAPACITY IN THE LESS FAVOURED REGIONS – NEW TECHNOLOGIES AND UNIVERSITY NETWORKS
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Universities and university related organisations are seen as a mechanism through which broad economical, technical and social change towards a knowledge economy would be achieved. Universities are a part of the network of building and shaping local/ regional innovation capacity and further technological change from traditional manufacturing to applying new technologies in the production processes. In the era of knowledge society very many regions and local communities/ towns are trying to compete with growing cities and the knowledge and intellectual capital resources. This kind of lagging behind-regions are called less-favoured regions and quite often they do not have universities their own or successful industry. Building institutional capacity could be a development tool to less-favoured regions to booze these technology orientated innovation processes. These regions are examples of regions, which are building their institutional base by forming university-industry collaborated knowledge transfer systems through networking.

For the beginning there is a need for structures and institutional base strong enough to create critical mass or capabilities. Further there are need for relationships, which are many times in the forms of networks, between both organisational and non-organisational, formal and informal institutions. Thirdly, the process of institutionalisation is also a crucial element of the development in the less favoured regions (see Amin & Thrift 1995, Henry 2001). To lead the process, there is a need of special regional or local development leadership (see Sotarauta 2001). The partners of the development network are in the need of mobilisation resources (see Healey et al. 1999) to gain the leadership. In the era of knowledge economy networked actors are forced to learn new skills and become more skilled in leading transition and interactive processes. In the light of this there should be more emphasis on mobilisation and therefore leadership from local to national level.

The aim of the paper is to study how universities through collaboration and localisation (establishing regional joint-activities or networks) can take part to local innovation networks in the less favoured regions? What kind of collaboration models universities and other development actors have formed in the less favoured region for technology transfer and further improving local innovation capacity and technological change? The paper is based on a case study from Seinäjoki and Pori sub-regions (Finland). These regions are examples of so called less favoured regions, which are building a strong institutional base by forming university-industry collaborated knowledge transfer systems through networking in order to emphasises the collaborative interaction between region-based businesses and higher education and research institutions.

AN INDUSTRIAL CLUSTER STUDY: AS A BASIS FOR THE AEGEAN REGION’S DEVELOPMENT POLICY
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Turkey is a country that has a wide variety of topographical and climatic conditions which form the basis of seven different regions, namely, Marmara, Aegean, Mediterranean, Central Anatolian, Black Sea, Eastern Anatolian and Southern Anatolian. There have been considerable social, economic and cultural divergences between these regions in terms of development indicators.

The Aegean Region, which is the focus of this study, is the second most developed region of Turkey. It’s share in the GDP has remained relatively stable around 17 percent during 1990-2000 period according to data provided by State Planning Organization of Turkey. The region has ten provinces. With more than 9 million inhabitants, it comprises around 14 percent of total population of Turkey. The region has some advantages like; high quality human resources, rich experience in manufacturing industry going back to the 19th century, small and medium sized industries comprising the majority of enterprises, a promising potential for inter-firm network development particularly in industries like food, wearing apparels, leather, metal wares and automotive, relatively more foreign direct investment in various branches, an international port, universities, geographic location (proper climatic and soil conditions, closeness to Europe, etc.).

However, despite these advantages, the region also has some disadvantages which can be summarized as follows: the lack of implementation of an effective regional development policy, limited number of regional institutions, inadequate institutional coordination between these institutions, poor vocational training, high level of brain drain, foreign trade of the traditional commodities of the region, inefficient R&D, low technology level, etc.

In order to overcome these disadvantages, regional resources need to be reallocated according to the requirements of a global competitive environment in the framework of new regional policy.

The study aims to identify manufacturing-based clusters across the Aegean Region and these clusters’ provincial locations, so that a base can be formed for potential regional policies.
DENSITY DEPENDENT DYNAMICS (FOUNDBING) IN AREZZO JEWELLERY DISTRICT (1947–2001)  

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This paper aims at applying the population ecology approach to the analysis of the evolutionary pattern of an emergent industrial district specialised in jewellery production: Arezzo (Tuscany, Italy).

Our work integrates the typical elements of the theory of industrial districts into ecological theories. In particular, we are interested in firms’ dynamics (entry, exit and growth dynamics). The key concept in our approach is the notion of density (the number of organisations in the population composing the structure of the district) and allows to evaluate the evolution of the organisational population.

There is an abundant research effort and a wide variety of approaches on organisational evolution, but the main theory that investigates long-term organisational evolution is density dependence (Hannan & Freeman, 1989), with the relative density model of legitimation and competition. The density dependence theory manages to explain the patterns of organisational founding, failure and growth rates in terms of two opposing forces: legitimacy and competition.

According to the industrial district theory, developed by Giacomo Becattini and his co-workers (Becattini, 1990; Becattini, 2000; Becattini, Bellandi, Dei Ottati, Sforzi, 2001), we consider an industrial district as a socio-economic and territorial entity characterised by the active presence of both a community of people and a population of specialised firms operating in a naturally and historically bounded area.

In line with the population ecology approach, we analysed in our previous studies the typical Marshallian case of Prato industrial district, applying a density dependence approach (Lazzeretti and Storai, 1999 and 2001; Lazzeretti, Vannucchi and Storai, 2002) and the community interdependence theory (Lazzeretti and Terchi 2002). Our purpose is to consider the industrial district as a “community of organisations” in the ecological sense, therefore identified by a set of different kinds of organisational populations (Lazzeretti and Storai, 2001): manufacturing organisations (small and medium-sized firms), commercial firms and service organisations. In this work, we apply our methodology to an emergent industrial districts, the Arezzo jewellery district, as regards foundations.

The paper analyses the evolution of Arezzo jewellery industrial district during 55 years (1947-2001) and investigates firms’ vital processes at a community level by grouping organisational populations in three multi-populations (complete-cycle, subcontractor, and trade and instrumental goods ). The information used to reconstruct life histories were collected from the Firms Book (Registro ditte) of Arezzo Chamber of Commerce. In total, we considered more than 34000 records, including 3610 foundings and 1618 failures. Database and data processing were obtained with Microsoft Excel 2000.

Relying on this extensive database, we tested the “population ecology” hypothesis for founding rates, studying the density curves of the organisational multi-population of Arezzo industrial district. The fundamental test of our basic hypothesis about population ecology is to observe whether the multi-population’s founding processes have a non-monotonic trend. This test is performed using exponential regression models (Poisson distribution). The results are consistent with empirically-observed trajectories of density, typical of an emerging industrial district.

Our results demonstrate the importance of studying industrial districts using the approach of population ecology to understand organisational dynamics. Even if, our study constitutes a first effort, it should be taken into consideration in order to develop other analyses of emerging industrial district.

References
CCIAA (1/1/1930-31/12/2001), Archivio cartaceo relativo all’assegnazione e alla cancellazione del marchio di identificazione, Ufficio Metrico della CCIAA, Arezzo.
CCIAA (1/1/1930-31/12/2001), Archivio cartaceo relativo all’assegnazione e alla cancellazione del marchio di identificazione, Ufficio Metrico della CCIAA, Arezzo.
CCIAA (1/1/1945-31/12/2001), Movimenti verificatosi nel registro delle imprese e nell’albo delle imprese artigiane ed elenco dei fallimenti dichiarati, Camera di Commercio Industria Artigianato ed Agricoltura di Arezzo.

For about 20 years, the model of development coming from outside and spreading through large companies from central areas to the peripheries (according to a functional and hierarchical logic), as systematized by PERROUX and BOUDEVILLE in their concept of centres of growth, has been replaced by models in which territories appear no longer as passive locations for receiving mobile companies, but as active territorial organisations capable of creating specific (opposed to generic) resources, developing innovation processes, etc. Indeed, in comparison with the former paradigm of externally propelled development (following a top-down logic), another development logic is now prevailing, one whose starting point is territories (following a bottom-up logic). In this way, the development of a region depends on its ability to stimulate local initiatives. One understands here the capacity of members of a local community (private and public actors, but also the civil society) to take initiatives at their own level. In addressing the problem in this way, a territory’s attraction is no longer a function of the locational factors it offers (presence of skilled labour, cultural and residential amenities, presence of universities and research centres...) but of its ability to adapt, to innovate, to generate new firms, to acquire comparative advantages.

The important shift from the notion of space (as a simple support of economic activities) to that of territory (as a social and evolutionary system) implies considering elements such as the historical role and path dependency, the local and regional know-how, learning processes, relational networks, cultural factors, embeddedness of actors, the role of local institutions, etc. Seen from this angle, territory is not given a priori but rather the result of a construction process.

In this view of regional development, public authorities become a crucial actor, an inherent member of regional networks. New forms of territorial governance have to emerge which should be based on increasing uses of collaborative/participatory decision-making: it is imperative to shift from a "public governing" of territories (government) to a "public managing" of territories (governance).

On the basis of this new theoretical background, the paper will present an empirical application concerning the Hainaut in Belgium. This area is a typical case of old industrial regions whose development during the 19th century was based on coal and steel industries. The main characteristics of its production structure are: a specialisation in heavy industrial declining sectors, a lack of industrial diversification, a weakness of producer services, an external control of local companies, a lack of entrepreneurship..... These deeply rooted factors are a handicap to the regional restructuring of the Hainaut.

1 This area is characterised by a low GDP and has been selected as a laggard region specially sustained by European structural funds.
2 In this framework, poles of activity, based in principle on heavy industry and driven by leading firms should spread growth through an area, due to the intensity of industrial relations and the need for complementary activities.

The paper seeks to analyse the process of economic development in the Italian region of Umbria and to relate it to the process of European integration and to the social, political and economic governance of the region. It will be argued that there is a strong relationship between cultural and political factors and economic development. It will be further argued that the approach towards economic development generally adopted by the European Union to an extent ignores this, and that it is certainly not appropriate to the needs of a relatively poor region such as Umbria. This region possesses specific characteristics which lead us to conclude that there is an 'Umbrian model' of regional development, which may be relevant to other regions in the European Union.

The paper is broadly divided into four sections:

- Economic issues, This section critically examines aspects of the relationship between the process of European integration and economic convergence at the regional level. It also briefly analyses the essential nature of the European Union’s approach towards regional economic development.
• Issues of governance. This section looks at the principle of partnership contained in the European Union’s approach to Regional Policy, and considers this principle in relation to the debate concerning multi-level governance and how this is effected in the Umbrian case.

• The Umbrian model. This section discusses the Umbrian model of development and relates this to the issues raised above. It challenges some of the prevailing orthodoxies in the European Union’s approach to regional development.

Conclusions
The paper is work in progress. It is part of an on-going, interdisciplinary and cross-national study. It utilises data collated by the regional development unit of the University of Perugia. Versions of the paper have already been presented at conferences, including “Régions et Gouvernance en Europe du Sud” held under the auspices of Le Pôle Universitaire Européen de Montpellier et du Languedoc Roussillon at the University of Montpellier, and the Regional Studies Association Conference at the University of Bilbao.

NEW FIRM FORMATION: AN EMPIRICAL STUDY FOR PORTUGAL
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In this paper we try to find out which determinants contribute to firm formation in the Portuguese regions. In special we are interested in determining the role played by territorial factors. To account for new firm formation two approaches were considered. In a first approach we use number of Portuguese industrial firms created in each concelho between 1995 and 1998, still active in 1998. In a second approach, we use the ratio of the number of Portuguese industrial firms created in each concelho between 1995 and 1998, still active in 1998, with active population in each concelho. According to our results, territorial factors play an important role on firm formation. Proxies used for localization and urbanisation economies are both statistically significant as explanatory variables of firm formation, but the estimated coefficient for the second variable is negative, capturing the inverse relationship between urban areas and constitution of industrial firms. Availability of funds is also a relevant determinant of firm formation. Relative importance of small and medium size firms in each concelho is also statistically significant, confirming that a good environment of small and medium size firms favours the creation of new businesses.

LOCAL AND GLOBAL KNOWLEDGE SOURCING IN THE LEARNING PROCESS OF POLISH COMPANIES
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The paper focusses on innovation in Polish manufacturing companies. It aims at detecting the kind of learning processes leading to this innovation and the role of local and global networks in this process. It is based on fieldwork in Polish companies in 2001 and 2002.

Methodology and conceptual framework includes considerations in relation to concepts of innovation, learning and technological capabilities as well as concepts of knowledge. Further the paper discusses the role of the environment in terms of external knowledge sources, their localisation, and the type of incentives leading to learning and innovation. The resulting approach is applied in an analysis of specific strategies of a couple of Polish case companies.

The analysis shows how the Polish companies have initiated continuous learning processes, as a result of new incentives, new communication infrastructures as well as internal capabilities of the companies. In spite of a seemingly dynamic process of learning, the paper points at certain mismatches or bottlenecks in the learning process which are likely to influence the future development of the companies negatively.

The questions to be dealt with in the paper include:
• What type of innovations characterize the Polish companies?
• What are the incentives to innovate?
• What type of knowledge are the innovations based on?
• What internal knowledge resources are the innovations based on?
• What external resources are the innovations based on?
• What type of interaction among the partners (is there a knowledge network?)
• What are the strengths and weaknesses of the knowledge bases of the companies?
• When and how do companies use the local or national network?
• When and how do companies benefit from international networks?
• How can the capabilities of learning of the companies be characterized and assessed?
• What environmental factors are felt problematic by the companies in their efforts to pursue workable strategies of change?

The paper is part of an on-going research on the development of regional systems of innovation in two Polish provinces.

BETWEEN SWEDEN AND DENMARK: THE INDUSTRIAL DYNAMICS OF THE ÖRESUND REGION
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The completion of the 16 km long bridge between the cities of Malmö in Sweden and Copenhagen in Denmark highly improved the accessibility of an area including 3 million inhabitants, over 1 million employees and more than 100 000 firms. The area also contains a concentration of research facilities, educational institutions and technological and commercial expertise with only few counter-parts in North Europe. For this reason, starting even years ahead the final political decision to build the bridge, there has been growing and far-reaching expectations of the Öresund area to emerge to a power-full cross-border region. A region with a new capacity to integrate and exploit technological and economic potentials created in two different national settings. So far these expectations of a dynamic impact of the bridge in terms of synergy effects and regional renewal have build rather on hopes than on in-depth analysis. The lack of more advanced studies of the Öresund area is partly connected with problems to collect and aggregate comparable regional data from two countries. Following this, one important aim of the paper is to discuss a theoretical, methodological and empirical framework capable to follow the economic development –before, during and after the completion of the bridge. The empirical analysis are performed

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with an identical division of industries based on differences of industries (manufacturing and advanced producer service) in terms of research and knowledge intensity, thereby making it possible to follow the same sectors in both countries across time and space.

The main objective of the paper is to focus on the implications of the innovative/industrial scope and capacity of the Öresund region as being part of two national techno-economic and industrial systems with different innovation based investment cycles, national and regional systems of innovation, industrial structures and historical development paths. Edquist & Lundvall (1993) showed that marked differences existed between the Danish system of innovation and Swedish system of innovation in the 1980s and early 1990s. Using R&D expenditures as a percentage of GDP reveals that Sweden is among the leading countries of the world using 3.80 percent in 1999 are above the United States and Japan and twice the EU average. The Danish expenditures are half of the Swedish accounting for 2 percent in 1999 and thus Denmark is not as R&D intensive as Sweden (EUROSTAT, 2001). Using R&D as a measure for R&D-intensity is problematic but the figures reveal that there are substantial differences between the two national systems. The relatively low level of official R&D expenditures in Denmark is explained by the fact that the Danish economy do not have large multinational corporations and the fact that the Danish economy has a large share of industries which are not driven by R&D as for instance the agroindustrial complex and the furniture cluster. The ability to implement and adopt new technology and make incremental innovations matters as well. Therefore, the Danish economic success in the 1990s is based on the ability to produce niche products to a global market either based on a high quality or through design such as the clothing industry and of course, the ability to imitate production technology and the tradition in the agroindustrial complex that have intensive linkages throughout the economy.

Furthermore, the paper will elaborate the importance of differences in position in urban hierarchies between the two parts of the Öresund region: Copenhagen at the top of the urban and regional hierarchy as a administrative and post-industrial growth centre in the Danish economy while Malmö and the rest of Scania positioned on a considerable lower level in the Swedish urban hierarchy.

Although much work remains to be done, the results so far indicates that Sweden and Denmark develop along two different national cycles during the 1990s which are not compatible to each other. In Sweden this period was characterised by the research-intensive industry nearly double its share of total manufacturing exports and value adding. This dramatic shift toward a knowledge based industry structure on national level has strongly affected the development in different types of Swedish regions, including the Swedish part of the Öresund region. In Denmark the service sector grew and the manufacturing stabilised although the growth of knowledge and research intensive sectors is not as outstanding as in Sweden. These totally different national development paths have so far lead to two separate trajectories of regional development within the urban hierarchies of the two countries. The concrete outcome for the Öresund region during the 1990s is a rapid growth in research and knowledge intensive industries (often considered as core sectors in terms of innovation capacity) on the Swedish side of the Öresund and a stagnation in identical sectors on the Danish side of the sound. Thus, the two areas constituting the Öresund region are embedded into two separate national urban and regional systems, that are historically different and each of them following its own pathway into the future. This will affect the future outcome of the region as an innovative milieu depending on its own endogenous capacities and receiver competences in combination with impulses from national and global networks.

JOCKEYING FOR POSITION: WHAT IT MEANS AND WHY IT MATTERS TO REGIONAL DEVELOPMENT POLICY WHEN PLACES COMPETE

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The realization that places compete for investment has expanded in recent years to encompass competition among places for the attention of migrants, tourists, and media glow as well as investment. To a large degree, the most competitive places have long been multidimensional in their attractions. Recently, however, one sees more priority being placed on attracting not only mobile investment but also mobile workers. Creative workers are the core of the knowledge economy and of its geographies such as ‘intelligent places’ and ‘learning regions’. Knowledge metrics, innovation indices, and report cards are increasingly common, each seemingly developed to sort the list of places in a different order. Indeed, lists or league tables of ‘the best places’ for business, to live, to retire, and to visit are key features of economies and societies whose factors of success are highly mobile.

This paper will provide a critique of the notion of competitiveness in a geographical context. It also will deal with the factors that attract investment, migration, tourism, and media attention. Increasingly, it seems to be the case that those who market places must deal with or juggle many different dimensions of regional development. Such competition is unlikely to go away, which suggests that policymakers need a better understanding of the multidimensional nature of place competition and of the interrelatedness of the various dimensions. While there is no single variable or metric on which one could create a single picture of place competitiveness, the various dimensions provide some commonality that allows policy to be crafted.

NATIONAL INNOVATION SYSTEMS AND INCLUSION: 
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To what extent does national innovation systems develop or exclude peripheral regions? The paper discusses this question through a comparison of innovation processes in major national clusters in Finland and Norway. The question of exclusion or integration is explained through (1) characteristics of the innovation process (analytic v.s. systemic innovation), and (2) the structure of the knowledge base of regions (3) national innovation policies. A distinction is made between analytically driven innovation systems (ICT in Finland) and innovation systems where systemic knowledge is at the core of the innovation process (the Norwegian maritime cluster). Based on this comparison, institutional conditions for enhanced learning in geographically distributed knowledge systems, combining synthetic and analytic knowledge, is discussed.
Regions have different capabilities, as well as opportunities and barriers, for the development in a knowledge-based economy. The differences are interlinked to specific regional histories and the general economic, political and cultural development of the society. The capability of a region is constituted of four main elements: the institutional endowment, the knowledge and skills, the built structures and the natural resources (Maskell et al. 1998). These elements are moulded by historical processes. In a knowledge-based economy the institutional endowment of crucial importance for the processes of learning and innovation. The institutional endowment represents an intricate contemporary interaction between old and new elements, from very old cultural traits (values, beliefs, religion etc.) to recent industrial standards and regulations. It embraces all the rules, practices, routines, habits, traditions, customs and conventions associated with the supply of capital, land and labour and the marked for goods and services. It also includes the entrepreneurial spirit and the managerial incentive structures. Finally, it includes governmental and political traditions and decisionmaking practices as well as attitudes, basic values and culture characterising the region. Not all institutional endowments are equally compatible with the needs of the contemporary market or knowledge-based economy, and institutional endowments are increasingly regarded to contribute to existing differences between regions and countries.

Institutional endowments are created by interaction of deliberate efforts as well as by coincidental and inadvertent incidents and circumstances, and they constitute an important constructed part of a region’s capability. This is less certain when considering the natural resources, in spite of the fact that these are vastly affected by human action and economic value connected to human knowledge, judgment and values. The specific knowledge and skills of an area have normally been created and recreated as a part of the history of the region, and from time to time been influenced by deliberate development policy.

In the institutional thickness-approach Amin and Thrift (1998) focus explicitly on the importance of the abundance of organisations and institutions (quantitative and qualitative ‘thickness’) for the capability for renewal and successful development in regions. Localised capabilities and thickness, however, are no everlasting assets for growth or successful development but assets that must be continuously recreated and renewed under changing conditions in order to avoid lock-in problems. In general capability building processes often have been associated with efforts to reduce regional innovation barriers and fragmentation, and strengthening development of regional clusters, innovation networks and innovation systems etc. But best practice is often impossible to simply copy even when it is observed, because any localised capability always is embedded in specific historical and geographical contexts.

The empirical analysis
The paper will focus on a study of restructuring and capability building in one of the largest manufacturing regions in Norway which have experienced a strong restructuring process the last decade. In the study the processes of restructuring and capability building are interpreted within a multilevel-perspective. The main focus is on restructuring and capability building in the four micro regions that constitute the basic functional and territorial units in the Østfold county. Actors in these micro-regions are increasingly cooperating with agents of the development and regional innovation system on the county level, and they interact closely in common institutions (political, administrative) and in developing capability building strategies including experiments to renew the economic structure of the region. The development strategies and the actors in these micro- and meso-regions are increasingly influenced of changes in national and international trade-, in industrial and regional policies, as well as by new bottom-up initiatives for cross-border development cooperation in sub-national and international macro-regions.

This imply that the regional restructuring and capability building in the Østfold region is embedded in institutions and processes on the three ‘territorial’ levels:

- The micro-regions as basic territorial and functional units for restructuring and capability building. The Østfold county consist of four micro regions (of local labourmarkets of 2-5 municipals in cooperation) each with specific histories, type of agglomerations (clusters), and processes of restructure ring (old/declining vs. emergent/new sectors) and capability building. Internationalisation, deregulation and the development of a knowledge-based economy, have produced different responses and outcomes in these regions, but at the same time resulted in a common change in the local development policies: From a state-oriented support focus and strong competition inside the county (support, subsidies, investments etc.), to more focus on local and regional capability building through cooperation and new organisations.

- The ‘meso’- region (county level) as proactive regional agent of change and development. On the county level the regional government together with different agents of development and innovation system building have become more important. The county government, regional state institutions as well as regional development agents, have been more proactive and to an increased extent initiated, coordinated and cooperated in development coalitions for capability building. This meso-level has been increasingly important for linking the actors and institutions on the level 1 and 3, and for intraregional cooperation and new bottom-up initiatives for cross-border development cooperation in sub-national and international macro-regions.

- National and international contexts. The Østfold region has to an increased extent been influenced by changes in national and international trade-, industry and regional policies, as well as new by new national institutions of innovation, sub-national development coalitions in the Eastern Norway as well as crossborder international development coalitions with the Western Sweden. First, the national context is an important institutional framework for restructuring
Complex processes occurring while transition of Ukraine from centrally driven economy to a free market have different impact on particular regions due to the specialities of their endogenous potential and flexibility to match continuously changing external environment. Urban and rural regions, old industrial and traditionally deprived territories have diverse trends in socio-economic development.

On the one hand it is easy to predict that big urban centres with developed infrastructure and potential attractiveness for the capital flows have succeeded in catching-up with contemporary tendencies in global innovative economy and built their life strategy primary based on demand but not supply category. On the other hand it is necessary to admit that traditional laggards have not much to lose in the course of general economic decline and social stratification in Ukraine since they used to the situation when their socio-economic level is below national average.

Thus the biggest concern of national significance for the moment is a fate of old industrial regions, used to status of locomotives of economic system for many years of socialist economy. They have something to lose and they are losing it gradually even without being aware of it sometimes. The challenge of this paper is to try to explain why Lugansk oblast - a region placed 5th in national industrial output and 7th in national Gross Value Added, possessing one tenth of national capital assets - is the poorest region according to Human Development Index among 25 regions of Ukraine.

Lugansk region in one of those Ukrainian regions, which suffered the most from negative consequences of deep economic crisis in 90th. The structure of regional economy and dynamics of its development do not correspond to modern requirements of market economy. There is lack of capital for renewal of equipment and technologies, which in its turn diminish a capability to react immediately on the changes in conjuncture of markets, which used to be secured for many dozens of years. Obsolete technologies, which are harmful for natural environment, depreciated capital assets, out-of-date equipment, high intensity of energy and recourse use make local products out-of-competition. It has its negative influence on social sphere and level of wealth of population. This region has one of the highest mortality rate, lowest personal income level, and worst situation with health and criminality.

The question is how relatively good indicators of economic development could co-exist with the hard social situation in Lugansk oblast approaching to collapse. The answer of cause cannot be singlefold. At least several serious deficiencies could be mentioned as those standing on the way towards sustainable economic development of the region.

First deficiency is the structure of property. State enterprises or those in property of big holdings managed by national-wide financial groups established by representatives of political elite provide a considerable share of regional output, secure more than half of jobs and tax payments. Nowadays they act according to the rules and standards close to those existed in centrally planned economy. On the contrary SME sector employs only about 5% of economically active population and gives even fewer amounts of taxes.

Second is the lack of institutions, which would link the multitude of economic agents, acting in regional private sector, into more-less coherent network, fertile for developing innovations in industrial and organisational processes. Absence of traditions in private business and low level of social activities are major constrains for getting progress in this particular sphere.

Third deficiency is ill-formed, competitiveness distorting system of public stimulus and privileges, aimed at increasing the level of investments and promoting investment climate of the region. Tax-cuts and subsidies are provided to big enterprises working in traditional sectors of economy, i.e. mining, metallurgy, chemical industry or agriculture. The minimum amount of investment project, which is eligible for getting state support, is varying from 500 thousand to 1 million US dollars depending on the sector. At the same time there is no sound system supporting SME and self-employment activities of local population. In terms of growing unemployment and the highest share of long-term unemployment such policies proved to be inefficient for supporting local economic development and achieving sustainable development.

These are only major elements of public policy, which would be analysed in order to give an account to real needs of local economy of Lugansk oblast to be competitive at national and international markets. The chances to change drastically the trends of socio-economic development of the region are in hands of well-grounded market-oriented reforms in economic and public sectors and local initiative.
three emerging economies - India, Ireland, Israel. The analysis is centered on software and IT-related services - software development, chip design and electronic devices design, computer and Internet services. The software industry in India, Ireland and Israel has grown very fast during the 1990s, especially because of the high levels of exports, which have reached over 70% of total sales in all these countries.

This paper aims to empirically test three related hypotheses. First, we expect that MNCs which carry out locally complex, higher value added activities span a wider set of linkages with domestic firms compared with MNCs that locate low value added activity. We assume that complexity and level of value added of activities conducted by MNCs are the result of factors such as communications costs, skill endowment and MNCs' global strategies. The analysis focuses on a variety of potential linkages such as sub-contracting, strategic alliances, vertical and horizontal spinoffs.

Second, we expect that different linkages have different implications for domestic firms' growth. The potential benefits from MNCs are mostly captured by a subset of the population - MNCs' spinoffs and from MNCs are therefore more directly exposed to the MNCs' knowledge assets.

Third, international links might provide access to similar resources as those provided by MNCs - e.g. technological and managerial skills, access to foreign markets. Therefore we expect also that the benefits from foreign firms do not necessarily derive from local linkages with MNCs' subsidiaries. Firms operating in open developing economies may gain access to similar or different resources as those provided by the subsidiaries of MNCs by establishing direct international linkages with firms located elsewhere.

This paper draws upon several sources of information: national industry associations and public agencies, Dun and Bradstreet’s Who Owns Whom Linkages database (2001 edition) InfotrackWeb database, Hoovers database, Annual Reports and corporate web-sites. Data on linkages and relevant events are collected for the 1982-2002 period. Moreover, additional qualitative data is collected through selected case-studies of MNCs located in Israel, India and Ireland.

Preliminary data on 1998-2002 seem to show that over 70% of MNCs located in India, Israel and Ireland have not been active in setting up linkages with local firms; however, there is evidence that the other MNCs have established high value added links with local firms. With regard to the combination of international and local links, preliminary data seem to point out that successful local firms have established many international links and only a few links with local MNCs’ subsidiaries; this highlights that maybe MNCs’ location is not very important for domestic firms.

The concept of sustainable development has gained widespread recognition since the Earth Summit of 1992, with policy documents at all levels increasingly attempting to integrate social, economic and environmental goals. Translation of the concept from rhetoric to reality has not proven easy. The local and regional scale has emerged, albeit subject to criticism, as an important level at which to interpret the often vague and ambiguous ideas surrounding sustainable development and translate them into practical initiatives. Ecosites are one approach which aims to contribute to progress in moving towards sustainable development at a local and regional level. An ecosite is a facility involved in service, research or production activity which has a dominant environmental theme.

This paper examines ecosite trends within a European context, providing an overview of developments to date. I present a classification of ecosites which encompasses seven major types of activity. Categories include sites involved in environmental education/visitor centres, environmental demonstration projects, sites with green themes in construction, design and infrastructure, sites containing firms engaged in the research and development of green products, processes and technology, sites with firms involved in environmentally-friendly manufacturing (green production processes and products), sites engaged in resource recovery activity and sites based around eco-industrial activity, that is projects where firms are involved in by-product exchange in an attempt to form a closed loop materials cycle, drawing upon ideas from industrial ecology.

The paper then reflects upon the shift towards ecosite development in one particular region, focusing on a number of planned and operational projects in Yorkshire and the Humber in the United Kingdom. The research draws upon interviews with developers, managers, local authorities and other stakeholders in order to understand who is driving the ecosite process and what pressures are motivating ecosite development. Given the range of ecosite approaches, it is important to reflect upon how the different types of site may impact upon local and regional development in different ways. Indeed, not all ecosites are consciously driven by the notion of sustainability or have it as a principal objective. Sustainability goals can become compromised or the orientation of a development change, which may have implications for the utility of the ecosite concept. The Yorkshire case study will be use

THE EFFECT OF GLOBALISATION ON INDUSTRIAL DISTRICTS IN ITALY: THE CASE OF BRENTA

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This paper is concerned with the impact of globalisation on local competitiveness in Brenta, one of the most important Italian footwear districts. The aim is to integrate the typical industrial district approach with the global value chain approach. To understand the changes confronting Brenta, the paper distinguishes between enterprises operating in a) the top brand chain, dominated by the owners of global brands in the luxury market, and b) the high quality chain in which German buying groups aggregate many independent footwear stores. The questions addressed are: Is globalisation pushing Brenta towards new value chains? What types of governance characterise the relationships between local and outside actors? Do the chains’ leaders come from inside or outside the districts? Does the integration of industrial clusters in global value chains enhance or weaken local upgrading strategies? One of the main findings is the increasing importance of the top brand value chain in the district. To be part of the chain, Brenta’s shoe producers accept a functional downgrading, abandoning design and marketing and focusing on production. Nonetheless, the remarkable recent growth rates in the luxury industry, which is
FURNITURE DESIGN AND REGIONAL ECONOMIC DEVELOPMENT

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Both the UK and the Canadian national furniture industries have been slow to adapt to changes in the nature of international competition and to engage in continuous learning. Typically, manufacturers have been reluctant to designate resources to improving product styling and as a result have become increasingly vulnerable to the demands of (ever more powerful) retailers. The paper reflects upon two attempts at a sub-national level to improve sector competitiveness through a strengthening of links between designers and manufacturers. The first is the Government of Quebec’s VISA Design programme, which offers tax credits to small and medium-sized manufacturers employing qualified designers to develop new products. The second is the East London umbrella organisation ‘Hidden Art’. The latter group’s activities have included initiatives seeking to support designer-makers and to enhance working relationships between manufacturers and designers in East London. A central theoretical focus of the paper is to critically reflect upon ideas about the potential role of ‘design-orientated’ or ‘creative’ activities in regional economic development.

NEW REGIONALISM ENCOUNTERS UNEVEN DEVELOPMENT: THE CASE OF THE MEZZOGIORNO OF ITALY

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In this paper I want to focus on the following points. First, drawing from the critiques of New Regionalism that an increasing number of authors (such as Lovering, Markusen, MacLeod, Tickell and Peck and so forth) have formulated in the past few years, I want to argue that the new approaches to endogenous growth and, in general, to local economic development fail to address some crucial questions regarding uneven development in the European less-favoured regions.

Second, I want to examine the literature on the emergence of a new path of endogenous growth in the South of Italy. According to these authors (in particular, Cersosimo, Meldolesi, Viesti and their research groups), there are a number of cases of new forms of regional development that have recently taken shape in this part of the country. In most cases, these processes of local development are based on the clustering of small and medium-sized firms in the form of industrial districts and local productive systems. The general argument is that these processes demonstrate that the South of Italy can achieve high levels of regional competitiveness if the State does not restrain local attitudes towards co-operation and social mobilisation with an invasive industrial policy. My critique of these authors is that the sunny optimism in this literature does not adequately consider the fact that most of these southern industrial districts lead to a revival for "pre-modern" forms of workforce exploitation (wages under negotiated national standards, piece-work, unhealthy labour conditions, covert opposition to trade union activity etc.). This criticism leads me to raise some questions about social democracy and new regional development in the South of Italy.

I conclude by bringing together the debate over New Regionalism and that over the so-called "New Mezzogiorno". My final argument is that critical scholars should stress to which degree these new forms of regional development lead to a "neo-liberalisation" of the space. With regard to my case-study, the final question I want to answer is: does the new post-Fordist geography of the Mezzogiorno reproduce class-inequality and re-configure long-term regional imbalances?

DRIVING EAST: MODELS, MANAGEMENT THEORY AND THE CHANGING DIVISIONS OF LABOUR IN THE EAST EUROPEAN AUTOMOBILE INDUSTRY

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After more than a decade of transformation, the extent of the take-over of the automotive industry in central and eastern Europe by firms from western Europe, North America, Japan and South Korea is well-documented. In this paper we argue that two aspects of the restructuring of the east European automobile industry are both less well understood, and given insufficient attention in much of the literature. Firstly, we contend that central and eastern Europe (CEE) offered an unparalleled environment for corporate experimentation, a one-off opportunity for trying new strategies, not all of which were to be successful. Secondly, we suggest that the transformation of the automobile industry was an inherently contested process, involving competition between potential investors, between these firms and the region's national governments, and between these firms and their workers. We go on to consider the ways in which these contested processes of experimentation have both influenced, and taken shape from, an emergent division of labour within the European automobile industry cast at a genuinely European scale.

In this way the paper examines the role of management theory in the restructuring of the east European automobile industry since the disintegration of the soviet system. It focuses specifically on the contestation that surrounds management theory and the formative impact that such theory has on spatial divisions of labour. We seek to address two problems that we identify with existing work on the circulation of management theory. Firstly, work on management knowledge tends to focus on the ‘new economy’ to the exclusion of traditional manufacturing industry. Secondly, this body of research tends to neglect the ways that the circulation of management theory involves contestation and negotiation involving not only managers but also consultants, academics, trade unions and employees.

In order to advance this argument, the paper is structured as follows. Firstly, we briefly describe the extent of foreign investment in the CEE automobile industry. Secondly, we examine the role of management theory in providing models around which the industry was restructured. Thirdly we examine the ways in which the region offered an environment for corporate experimentation and associated contestation, focusing on three dimensions: labour recruitment and labour relations; modularization; and supply chain management. Fourthly, we trace the development of experimentation in east and central Europe through a case study of General Motors.
THE LOCAL TERRITORIAL SYSTEMS AND THEIR ENVIRONMENTAL SUSTAINABILITY

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The paper will debate the concept of "milieu" in new regional development trajectories, mainly applied on Italian Regional System in the latest decade. Moreover the paper will report the preliminary results of a large research made by a national Study Group on individualization of SLOTs (Sistemi Locali Territoriali - Local Territorial Systems). For that Group, SLOTs are, before than a territorial defined entity developed among certain boundaries, an aggregation of subjects in reciprocal interaction. They, by means of specifical relations with their local milieu, operate sometimes as a collective subject.

The discussion of this definition leads to debate about the pro-active territoriality problem in the process of local sustainable development and the role of multi-scale geographical representation in these processes. The pro-active territoriality is identified as social interaction able to mobilize local territorial resources (material and immaterial). As a conceptual model, the local territorial system, enables to assess the "territorial added value" and the sustainability of territorial transformation, while regarded as a political multilevel construction. It is a form of governance, helpful to struggle against the territorial fragmentation. More deeply, the paper will try to discuss the different instruments to measure environmental sustainability in these new kind of individuate meta-territories. It's not an easy aim, but some instruments (ecological footprint, Life Cycle Analysis, emergent frame analysis) seem to be the more feasible ones.

A STUDY OF RESEARCH, PRODUCT DEVELOPMENT AND INTERNATIONALISATION IN THE U.S. BIOTECHNOLOGY SECTOR

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This study examines the challenges to research, product development and inter-nationalization in the U.S. biotechnology firms. Particular attention is given to their R&D and commercialization strategies in the two major biotechnology clusters: San Francisco and Cambridge. A related objective of the paper is to understand the variation in the innovation performance of biotechnology firms—how firm-level and regional characteristics help sustain and foster innovation? The data for the research are obtained from questionnaire survey, directories, and interviews with R&D personnel in biotechnology companies.

First, the paper examines the relationship among the following variables: R&D intensity (the percentage of total revenue allocated for R&D), collaboration, innovation performance (number of patents, number of products in the market, number of new processes introduced), business performance (total revenue, sales, exports, profit), and location (cluster versus non-cluster). The results show that R&D intensive or research-oriented firms engage in collaborative R&D activities with universities—however, the universities are not necessarily local. In fact, several collaborations are with universities located in other biotech clusters elsewhere in the US, Canada or Western Europe. A larger percentage of firms based in the recognized clusters of biotechnology industry have higher levels of R&D intensity and have higher numbers of R&D collaborations with both university and industry. Firms with high level of R&D intensity have better innovation performance (e.g., patents)–similarly, firms with R&D collaborations show better innovation performance than non-collaborators. The product/process oriented innovators as opposed to the research-oriented innovators (using patents as the measure of innovation and the focus is usually drug discovery) emphasize both diagnostic and therapeutic products. In addition, they derive their revenues through domestic licensing and sales, as well as international licensing and sales. In fact, data show that in recent years (1996-1999), US biotechnology trade grew by 13.2% a year on average, whereas total trade grew by 6.5%. The top three export and import destinations (1999) are Belgium, Japan and Canada and Belgium, France and Switzerland, respectively. The international operations of US companies, such as Genzyme, show that an important aspect of such international transaction is probably intra-firm trade (no data are available).

Second, R&D and commercialization strategies of cluster-based firms (San Francisco and Cambridge) are examined with a specific objective of understanding the importance of cluster location for the innovation process. Location continues to be important for start-ups—first, the local universities are sources of the start-ups and second, some companies do relocate to these clusters to seek financing through venture capitalists. The importance of cluster location is not the same for established companies (few years beyond the start-up, both public and private). To some, the locational inertia is the reason for preferring a cluster location at the face of increasing real estate costs. Almost all mention the importance of the scientific labour market in these clusters. The access to R&D support personnel is rated as equally essential and California companies indicated a close relationship with local community colleges to foster training of lab technicians and other R&D support staff. The second most important reason for a cluster location is the need to be close to or proximity to other biotechnology firms. However, the need for proximity is not influenced by the need for collaborators—the backdrop of scientific excellence, entrepreneurial environment and a supportive institutional/service infrastructure projects an "image" of hope and success to these volatile biotechnology firms. Cluster firms acknowledge how a San Francisco or Cambridge affiliation automatically signifies acceptability to prospective clients and collaborators.

The perception of proximity is different in Cambridge from San Francisco. In the Bay area, the whole region is acceptable. In Cambridge, the cluster is not the Boston metropolitan area—all firms want to be in Cambridge, huddled around MIT and not even across the Charles River to the South. To Cambridge firms, rte 128 is too far. As a result, old buildings are being restructured and new constructions are being accommodated in the Cambridge area. Furthermore, large pharmaceuticals are now drawn to the Cambridge area (Novartis) because they want to be near (few blocks) the knowledge source.

The third cluster characteristic noted by all firms is the availability of superior quality legal counsel for patenting, regulatory approval, and the formation of strategic alliances. Cluster-based firms also acknowledge the assistance of local associations as information brokers (e.g., MassBio in Massachusetts) but non-cluster based firms emphasize the assistance of government programs in the commercialization of biotechnology-based products.

Third, the evaluation of R&D policy and collaboration strategies shows that U.S. firms seek cluster-to-cluster R&D collaborations and their R&D policy is mostly driven by the identification of unmet market needs. However, examples of
technology sourcing from non-cluster based universities are not uncommon. For example, a key technology for Biogen's main drug came from the University at Buffalo and not MIT. Alliances with pharmaceutical companies are driven by the following firm-level considerations: (i) a collaboration with a leading firm attracts investors - a partnership with a big pharmaceutical company improves the image and credibility of a biotech firm and thereby attracts investors who are hard to come by in the biotech business; (ii) education and security - a pharmaceutical company has experience and recognizes pitfalls. Also, big companies have the resource to access publications, accumulate corporate intelligence, and understand business development. Furthermore, funding from big pharmaceutical companies provides financial security; and (iii) risk management - the main risk in biotech is not getting an early start on an experiment or missing out on the right experiment. In other words, the lack of quality control can be costly. Pharmaceutical companies improve the level of quality control in a biotechnology firm. However, the art of partner selection is to find a pharmaceutical company, which is already a leader and a company which will prioritise the collaboration with the biotech in its overall R&D and innovation strategy. Until now, the location of pharmaceutical companies was not an important consideration because in the US most are clustered in the New Jersey area and firm-level factors mentioned above dictated the formation of alliances. However, with Novartis establishing its presence in Cambridge, the dynamics of clustering in biopharmaceutical will continue to be an interesting topic of analysis.

**RESPONDING TO A REGIONAL ECONOMIC CRISIS: AN IMPACT AND REGENERATION ASSESSMENT OF THE SELBY COALFIELD CLOSURE ON THE YORKSHIRE & HUMBER REGION**

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The English regional development agencies (RDAs) were only established in 1999 and still have relatively embryonic regional economic strategies. Accordingly few have direct experience of responding to significant, localised, economic shocks, such as those occasioned by the demise of a large employer. In July 2002 UK Coal plc announced that coal mining at Selby, Yorkshire, would cease by Spring 2004 with the loss of 2071 direct mining jobs and the threat to additional numbers in the local supply chain. In addition to the local employment and related social effects, the closure marks another stage in the regional impact is noteworthy in that the Selby mines complex is not the usual legacy of a long-established inefficient coalfield development using redundant technology and outdated equipment. Instead the mines were developed in the 1908s as the world's largest deep coal-mining project covering 110 square miles. The project included ten shafts and 124 miles of underground roadways involving innovative solutions to shaft-sinking, access and ground treatment; concepts that have subsequently been applied worldwide. At its peak in 1993-94, Selby produced 12 million tonnes of coal per annum and was regarded as the "jewel in the crown" of the UK coal industry. The demise of the mines complex will have a significant psychological, economic and social impact on the region, and the Selby and Wakefield communities in particular.

This paper is based on a study by the authors and commissioned by the regional development agency, Yorkshire Forward, in the weeks prior to the formal closure announcement in July, 2002. The paper examines the causal factors behind the closure, the regional impact and the regeneration needs arising. It discusses the process involved in responding to such an economic shock, with lessons for development agencies facing similar events.

In documenting the causal factors underlying the closure, the paper highlights the changed economics of electricity production, the main market for UK coal, and the impact of import substitution affecting coal supplies. Falling wholesale electricity prices, excess generating capacity, alternative fuel bases and the availability of cheap coal from diverse locations, including India and Colombia, have all adversely affected UK coal production and sales.

Data from UK coal, NOMIS and a regional econometric forecasting model is used to forecast that up to 4000 jobs are at risk; 2071 in the mines, 909 in related industries, and the rest as a consequence of lost regional income and expenditure. The direct job losses will be mainly for unskilled and semi-skilled men, with the greatest impact felt among selected wards in the Selby district. However, data on miners' residences reveals concentrations in Wakefield and Barnsley districts, both of which are recovering from the legacies of previous coal mining closures. Significantly, many of the Selby miners are relatively young and less likely to retire from the labour market, thus requiring co-ordinated re-training and business development packages in the region.

As Selby is fundamentally bereft of aid, the relevant authorities will have to consider issues such as the need for Local Economic Development reviews of Selby and Wakefield, and whether Selby should be re-considered for Special Development Area status. Moreover, business support will be required for the mining supply companies affected by the closure.

Central to any effective regional response is the process of early engagement with, and by, key stakeholders, and the assimilation of data pertinent to the closure, the workforce and affected communities. As such, intensive discussions were conducted with key private and public-sector bodies including miners, UK coal plc, planners, training agencies, government officials and politicians. A primary outcome was the establishment of a Selby mines closure taskforce, chaired by Lord Haskins, and led by Yorkshire Forward. The paper documents the thinking behind the creation of this task force and makes reference to similar bodies established some years previously in the context of the Rover (cars) and Corus (steel) closures. A £25 million regeneration package proposed for the 2002-2006 period is evaluated with its three interlocking strands: people and social regeneration, environment and infrastructure, and business development.

Overall the paper examines how a regional development agency can react swiftly and proactively to a potential regional shock, whilst attempting to provide leadership and co-ordination in regional restructuring.
FOREIGN DIRECT (DIS)INVESTMENT IN PORTUGAL IN THE CONTEXT OF AN EUROPEAN INTEGRATION PROCESS

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Portuguese economy and society have undergone major changes in the last two decades. It is widely recognized that integration in the European Union (EU) was a determinant factor to that changes. However, some structural deficiencies in the economy still remain and strong regional asymmetries are yet to be overcome. Namely, progress in the qualification of the workforce has been insufficient and some industries still rely heavily on low labour costs.

Foreign direct investments, namely those from other EU countries, helped to shape the economic geography resulting from those transformations. On the other hand, the accelerated mobility of capital in a context of globalisation and the inevitable EU enlargement led to new challenges. One clear indicator of increased competition is the decrease of foreign direct investment in Portugal in the last years. Moreover, some foreign investors shut down their plants, which also arises the question of the investments’ embeddedness with the territories and the equation of alternative regional development strategies.

The objectives of this paper are to present the recent trends of inward foreign direct investment in Portugal and to reflect about several divestment processes and its impacts occurring in Portuguese regions. Some of these regions are particularly fragile as their economies are dependent on traditional industrial sectors, as textiles and clothing, and increased international competition has put in peril their sustainability. Divestment is not only a very complex issue at an economic and regional level of analysis but also at a social one, as it is often related with negative social impacts and imagery. This means it will be necessary to develop specific case studies to comprehend the process of divestment and its impacts at a regional level.

The first section discusses the role of foreign direct investment in regional development in Europe, in the light of the process of a continued economic and political integration. Secondly, we discuss theoretically some of the factors underlying divestment focusing on the issue of foreign entrants. In the third part, we analyse the trends of foreign direct investment, in general terms and specifically by type of operation, by sector of activity and by region. Focusing in the industrial sector, we discuss in the fourth part of the paper some paradigmatic cases of divestment by foreign entrants in Portugal. We conclude by reflecting about possible policies in order to prevent divestment and/or minimise its impacts in a context of European integration.

THE HISTORICAL PATH DEPENDENT DEVELOPMENT OF REGIONS: THE EVOLUTION OF URBANIZED ECONOMIC CONCENTRATION AREAS IN BELGIUM. HOW AND WHY?

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Belgium is a densely populated area with considerable conurbations like Brussels, Antwerp, Ghent and Liège. Belgium is located at the heart of the dynamic and centrally located Central Capitals Region1 (European Commission, 1994). Consequently, it is an environment where cities play an economically and demographically dominating role. This, in turn, creates a strong spatial pressure with suburbanization as an important result.

This paper addresses the question how decisions of companies or other economic agents to locate or relocate their plants or businesses affect the suburbanization process and the geographical expansion of economic activities. In particular, we use pooled cross-section data to examine how agglomeration disadvantages and congestion in large cities affect the geographical de-concentration of the economy and suburbanization process in conurbations. In view of our result, we evaluate some policy issues: How can the government influence these processes, and if so, how should policy makers interact with these economic trends.

Our research indicates that industrial companies shun large cities and relocate in their broad surroundings. Service companies usually accommodate better in cities, but the larger the city, the higher the growth of the employment intensity in the skirts of the city compared to the center of it. More detailed sector analyses indicate that the combination of space requirements and accessibility is the main reason why companies relocate from a city center to the urban fringe. This is not only the case for industrial companies but also service companies requiring a significant amount of space (e.g. transport, distribution, logistics, some wholesale activities, etc…). This does not imply that city centers aren’t attractive anymore for economic activities, on the contrary. What we are witnessing is a fundamental restructuring process where lesser space intensive activities (industrial as well as services using a big amount of space per employed person) are replaced by space intensive activities (in most cases specific segments of business services). As the space index (workforce per km²) is much higher for these types of activities, also the workforce per km² is still rising faster in city centers than in the urban fringe or more remote areas. Consequently, the strongest restructuring processes are taking place within the cities.

ORGANIZATION OF URGENT PRODUCTION: MESSAGES FROM THE NEWS INDUSTRY

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In this paper I challenge the two canonical theories of industrial organization, namely transaction cost economics and the knowledge-based view of the firm by arguing that they are inadequate to understanding the organization of urgent production. I suggest production of urgent goods leads to integration or production in house as opposed outsourcing to networks (hybrids) and markets despite absence of real hold up possibilities. Moreover, I suggest that firms engaged in urgent production do not focus on certain core competencies but integrate non-core competencies too. The reason behind this can be traced back to urgency in the sense that in house-production is a more efficient governance structure than non-in house for urgent production since it allow firms to respond fast to unforeseen events because it eliminates search time for independent contractors, it gives a higher degrees of guarantee for timely delivery of goods and, finally, integration better facilitates internalization of firm-specific (or even sub-firm specific) routines among employees; this is needed when activities are to be undertaken fast. Hence, outsourcing is only used when firms cannot build internal competencies or where they don’t have sufficient internal scale. The theoretical claims are documented in an illustrative study - based on original data - on the use of governance structures in the news industry.

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While the previous statement was derived from statistical analyses, the observed restructuring process is also being tested with regression results. A first type of regression explains the absolute growth of employment located on specific industrial estates by the surface that was already occupied at the beginning of the period and by the surface that was additionally acquired by firms during the period. For the period 1991-2001, we find that the first independent variable is responsible for the loss of 6 jobs per hectare. The second variable is responsible for a positive employment effect: for each hectare companies bought during that period 15 new jobs were created (all else equal). These findings show that densely populated (urbanized) regions with a large stock of firms that are already for a considerable time located in the region, are responsible for job destruction. The balance can only be positive if sufficiently new companies are located in the region. Of course, when the impact of agglomeration diseconomies and congestion is too strong not enough companies new will settle in the region (as it is the case in Antwerp). This is a simple but powerful explanation why economic concentration areas tend to have a decreasing employment to the advantage of less densely populated regions. However, the results indicate that there is a inverted-U shape relationship between employment growth and the employment density: the employment growth in both the center of larger cities and the peripheral (rural) areas is lower than in the broad surroundings of the cities.

We also find that the prices for industrial sites highly vary between different regions in Belgium: not surprisingly urbanized regions have much higher price than peripheral regions. Prices also have a different role in different parts of the country depending on its urbanization level. In regions with a high employment intensity (high) prices bring down the number of investments in local industrial sites. In remote and non-urbanized areas there is no relationship between prices and sales of industrial sites: this, but also other findings indicate that one has also to take the average firm age in different areas into account as ‘population ecology’ do (Carroll and Hannan, 1999). The fact that older industrial areas in urbanized regions count relatively more older firms limits to a certain extent the employment growth potential because the capacity to react properly on changing environmental conditions is not as high as it is the case with local populations of relatively young firms. Hence, growth differentials between regions are not only a function of the industry structure but also of the demography of cohorts of enterprises.

Furthermore, we find that the availability of new industrial sites on the market influences (up to a certain level) sales – e.g. a supply driven demand. We calculated that the considerable shortage of supply of new industrial sites in Flanders (the northern part of Belgium) in the nineties has led to a lost opportunity to generate 35,000 jobs during that decade. Finally, we also analysed the relocation habits of companies. The average distance is less than 20 km and the median is less than 9 km. Hence, companies relocate at relatively short distances. Other Belgian studies (e.g. Ghys and Rentmeesters, 2000) indicate that more than half of the sales of industrial sites is for the expansion and relocation of existing companies. Arguments why companies want to relocate over short distances are developed in the so-called ‘lodging’-theory (Brouwer, 1994).

The combination of the analysis of the geographical dynamics of the economy, the demographics of the industry communities and the relocation practices of firms offers in our opinion a fruitful avenue to understand how and why the economy evolves geographically and how a policy makers may (or may not) act on it.

1 Central Capital Region means South East England, the Southern Netherlands, Belgium and Northern France and North East France.

References

BROUWER, H., 1994, Kantorenmarkt en stadsstructuur, Rodopi, Amsterdam.

THE PITFALLS OF CLAN-POLITICS IN DONETSK

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The regional economy of the province of Donetsk, accounting for 10 per cent of the population and 20 per cent of industrial production of Ukraine, is monopolised by a coherent group of commercial-industrial groupings that have also ‘privatised’ regional and local public authorities and that are controlling remaining state-owned industries. The dependence of Donetsk upon value subtracting industries, such as steel and coal, has been strengthened during the 1990s, while industrial production has declined by approximately 75 per cent.

Insight into the dynamics of clan politics provides the key to understanding the social and economic predicament of Donetsk. Alternative approaches, such as that of the ‘virtual economy’ and ‘partial reform equilibrium’ are not very helpful in explaining developments in Donetsk.

The economic system is embedded in a neo-patrimonial policy. Clan loyalty is more important than formal rules. Clan rule is perpetuated by a belief system and a set of social practices. The cult of power is crucial among the social practices that have survived socialism. It is argued that the predominant nature of social capital is pre-modern and that due to this organisational capital is largely lacking. Miners militancy has been easily manipulated by the Donetsk clans for their own purposes. Donetsk stands out among Ukrainian regions because modern tendencies in the policy are even more marginalised than in Ukraine at large. There is a lock-in situation in which adherence to practices and belief systems of the past hampers a break through towards a new development trajectory that would exploit the huge human capital Donetsk has in terms of educational levels.

The Donetsk clans have the power to prevent specific reform measures of government in Kiev to be implemented in Donetsk.

Despite apparent attempts to attract foreign capital, such as free economic zones, conditions for attracting foreign investment are even worse than in Ukraine at large. Regional economic strategies are geared towards squeezing the state, for example through tax exemptions and direct state subsidies, and strengthening of traditional industrial sectors.

The case of Donetsk is topical, not only because of its economic weight and growing influence of the Donetsk clan in Kiev and other provinces, but also due to the fact that many in Kiev see Donetsk as an example to be emulated elsewhere. The question is considered to what extent the strategies of dominant clans
shifted from rent-seeking towards productive investment and to what extent recent economic growth is sustainable.

A DECLINING ITALIAN REGION: THE CASE OF PIEDMONT

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During the period between the Fifties and the Nineties, Piedmont was the second most important industrialised region in Italy, after the leading Lombardy. During that decades Piedmont was a leading region as far as the production system, the international trade and the innovation system are concerned.

For examples, our region in the Seventies and Eighties represented 10% of total population, but more that 12% of the Italian GDP, 15% of Italian export, 20% of Italian R&D investments. A huge number of local companies were among the biggest companies of the Italian industrial system, such as Olivetti in the ICT industry, GFT Gruppo Finanziario Tessile in the fashion industry, Fiat in the automotive industry, Alenia in the aerospace industry, etc.

We can say that all the economic actors of that positive scenario have changed dramatically in the last decade: the failure of Olivetti, is one of the cause of the declining high-tech sectors in Piedmont; the failure of GFT Gruppo Finanziario Tessile and the closing of some local Fiat plants are the effect of the de-industrialisation process that affects the region.

The declining of the Piedmont industrial system is well represented by a lower GDP share (9% of the Italian one) and by a lower GDP per capita in the Nineties; in addition, the reduction of competitiveness of the local firms is showed by a lower export shares (in comparison with the Italian ones).

Our paper analyses the evolution of the economic statistics of the Piedmont economy, with particular attention on the statistics concerning the Regional Innovation System (RIS), using a dataset of long-term statistics. Our main goal is to show the relationship existing between the characteristic of the economic structure and that one of RIS, and how that relationship could affect negatively the expectations about the future. As the main part of the Piedmont R&D efforts is originated in the mechanical and automotive industries, and in the local large companies, the declining of Fiat is going to affect negatively on the RIS.

In the second part of the Nineties, some economic and R&D data can support this hypothesis.

The evolution of the economic structure shows an increase of production and employment of Small-and-Medium Sized Enterprises (SMEs). The technology demand coming from SMEs is analysed, in order to say that the R&D investments coming from SMEs will not probably be able to compensate the R&D effort of large declining companies.

In our paper the evolution of the RIS is analysed by the supply side - i.e. the number and the activity of Universities, R&D centres, innovative firms, technology transfer centres, Science and Technology Parks – and by the demand side - the technology demand by local firms. At the same time we consider the statistics of technological input, such as R&D investments and employment, and that one of technological output, such as patents, technology balance of payment, high-tech exports.

Within the study on the technology input, the statistical data show the declining effort of each industrial sector: the mechanical and the automotive sector, the most important industries in the region, are the main responsible for such a reduction.

The paper describes the local innovation policy that tries to overcome economic crisis. We find that the interdependence between structural change and RIS is considered in the local innovation policy. The last one is going to foster the R&D efforts of the non-declining industries and of the SMEs. The creation of five Science and Technology Parks is one of the examples taken into consideration. In addition, we consider the policies that focus on fostering entrepreneurship, quality production, technology transfer and research. The main goal of that policies is to overcome the crisis of the declining sectors by the promotion of New Technology Based Firms (NTBF) and the restructuring of the old production.

EVOLUTION OF KNOWLEDGE NETWORKS: COMPARISON OF TWO SECTORS IN WEST MIDLANDS

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Understanding of innovation process has made considerable progress in the last two decades. Unlike a previous understanding of the process as an exclusive internal activity within firms that follows a linear path from research to production and to the market, the process is now regarded as interactive and multi-linked (Freeman, 1988; Dosi, 1988; Lundvall, 1992; Storper, 1994). While undertaking innovation activities internally, firms also search, select, and adopt technological knowledge from external sources by contacting other agents (e.g. suppliers, customers, universities, research institutes, government agencies, etc). Viewing such linkages among agents as a system, 'innovation systems' theory (Lundvall, 1992; Nelson, 1993; Braczyk et al., 1998; Edquist, 2000) assumes that the system at the national/regional level influences the innovation capacity of firms.

Another significant progress in the understanding of technology and industry is the evolutionary nature of their development. In their seminal work, Nelson and Winter (1982) argue that technology emerges from a large set of possibilities of developmental directions and evolves incrementally under the influence of economic forces as well as institutional and social factors. According to this view, while a trajectory of technology evolves, it also shapes a developmental path of an industry(s) closely linked to it (Dosi, 1984). The aspect of co-evolution between technology and industry is also captured by those theories about life cycle of product/industry. Particularly, Markusen (1985) argues that an industry goes through a series of stages from emergence to maturity and decline in terms of its structure and profit level along with development of its core technology and production system.

By drawing upon these two strands of literature, the paper explores the system of innovation linkages from an evolutionary perspective. The research asks how the organisation of innovation linkage system changes over time along with an industry’s life cycle, focusing upon four aspects of the system. They include types of actors, spatial structure, natures of relationships (type, intensity, longevity, origin, etc), and transaction contents (type of knowledge, value, role, medium,
A survey of over 100 firms and additional 15 in-depth interviews were undertaken, asking about the above four aspects of their innovation linkages as well as their innovation activity (e.g. type of innovation, firm size, performance, technical staff number, etc). The research finds that while sample firms show some significant differences between the two sectors in types of knowledge sought and media used in knowledge acquisition, they have, and seek for, similar kinds of relationships with their contacts, showing little sign of progress in the process of maturation or ‘lock-in’. This contradicts the ‘lock-in’ process assumed in some literature on regional innovation systems. In addition, firms in both sectors show little sensitivity to geographical proximity to their primary contacts: a majority of firms, whether in the emerging sector or in the mature sector, have their primary sources of technological information outside their region. The finding is again contrary to the assumption of spatially bound, regional system of innovation linkages, which is found in many studies. These findings suggest a more complex process of innovation linkage system development than normally assumed.

**References**


Freeman, C. and Soete, L. (1997) The Economics of Industrial Innovation, London: Pinter.


The response to economic restructuring in the UK has placed considerable emphasis on cluster-based policies as a mechanism for regional renewal. Such measures have been designed both to enhance the competitiveness of existing clusters of economic activity and to promote new clusters in areas of perceived strength within regional economies. In the more peripheral regions of the UK geographic concentrations of traditional industries provide a promising target for cluster-based measures geared towards capitalizing on traditional industrial strengths.

Much of the recent literature on clustering assumes that dense local linkages between clustered firms provide an important mechanism for generalizing or collectivizing sources of competitive advantage. In additional to traditional agglomeration economies these include the diffusion of tacit knowledge, the exchange of untraded interdependencies, and the development of trust and mutual understanding between firms. Such arguments assume that clustering serves to further the spread of “best practice”. It follows that firms that are well embedded, via dense and extensive local linkages, are well positioned to capitalize on such advantage.

Yet in the case of traditional clusters within older industrial regions the spread of best practice commonly remains little more than a heroic assumption. The objective of the current paper is to examine the relationship between clustering and the presence (or absence) of entrepreneurial or dynamic practices on the part of a sample of small firms located within one of the UK’s best-known traditional industrial clusters – the Sheffield metal working industry. Rather than assume that clustering provides a proxy for dynamic economic behaviour, we seek to establish the nature and extent to which dynamic firms engage with cluster partners. Are dynamic firms more embedded in their territories than their laggard brethren? Are clusters an assembly of the dynamic and the virtuous or a congregation of the moribund?

The analysis explored the attributes of 70 owner-managed firms with 50 or less employees in the Sheffield metal working cluster. A variety of firm and owner-manager characteristics, collected through structured interviews, are used to discriminate between dynamic and laggard firms. We then analyse the extent to which the dynamic/ laggard distinction relates to embeddedness within the metal working cluster. In short we seek to establish the strength and reliability of the relationship between cluster embeddedness and entrepreneurial character.

Our results question a number of common assumptions on the part of the cluster literature. To the extent that current regional policy rests on conventional wisdom, we would thus caution against the ready application of cluster models in favor of a more rigorous specification of the virtues and potential vices associated with clustering, and the implications for its relationship to regional competitive advantage.

**Clusters and Cluster Policies in Regions of Structural Change – Comparing Three Regions in Northrhine-Westfalia**

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Still facing problems caused by industrial restructuring, regions in Northrhine-Westfalia are looking for solutions and possibilities to come back to sustainable economic growth. Therefore cluster policies are getting more prominent to sharpen the economic profile of regions and therefore support the economic development, not least because of some successful examples like the media cluster in Cologne.
Although there are a lot of policies on national and federal state level that influence or shape the way and speed of restructuring and cluster development, cluster development and regional cluster policies differ a lot between regions in Northrhine-Westfalia.

Against this backdrop the Institute for Work and Technology lead a comparative study that analyses three different regions in NRW. The aim is to analyse similarities and differences in cluster development and the reasons for these in order to derive strategies for other regions. First results that stand out show that cluster policies strongly depend on regional set-ups, regional and sectoral economic atmosphere, regional socio-cultural background and single companies.

Basis for this analysis are different projects we worked on the past years. There we analysed clusters, cluster building and cluster policies in three different regions in Northrhine-Westfalia. On the basis of statistical analysis and more than 400 personal interviews with innovative companies and related institutions different clusters had been identified in the Ruhr Region, the Rhine Region and in East-Westfalia-Lippe.

In these projects we analysed existing clusters and identified upcoming fields of competence, promising growing markets and a new field for the region and its economy. After looking at the production chain1 of each cluster we analysed the existing parts of this chain in the region. How many and what kind of companies, research institutions and associations are there? How is the networking between these actors? Is there an existing institutionalised cluster management? Are there policies on national or federal state level supporting the cluster? How does the cluster policy in the region look like? Do they support this cluster or is it ‘unpopular’? What can the companies themselves do to build up a successful cluster? These and other questions were answered in the studies. The results differ a lot depending on several circumstances. These differences in clusters and regions prompted us to compare our results in the named regions.

In this new ongoing comparative study we have two main focuses on evaluation:
Firstly, we want to analyse the reasons for success or failure in more detail. Therefore we want to know what the decisive factor is – the sector or the region. How strong is the influence of the general sectoral development on regional cluster development? Does a critical sectoral situation necessarily affect the regional sector? And how important are the regional general set-ups on the other hand? Can regional terms, socio-economic conditions or international networks protect regional clusters against sectoral downturn?

Secondly, it is interesting to analyse how regions build up their cluster management, what problems they have in doing so and in what way cluster management can influence the success of clusters and regions. Our hypothesis is that the ability to build up a professional cluster management will be the decisive factor for successful regional economic development.

There are three exemplary sectors that will be analysed in the three regions. The automotive industry is a strong sector in Northrhine-Westfalia that has a long tradition. The motors are especially Ford in the Rhine Region and Opel in the Ruhr Region, but there is also a large ancillary industry with numerous SMEs all over Northrhine-Westfalia, specialised in metal or electronic supply. Secondly we compare the ICT (Information and Communication Technology) sector in all three regions.

The ICT sector has been a top focus on the agenda of business firms and politicians over the past years as it was regarded as a steadily growing job machine. Although recent developments on new market stock exchanges have opened a more realistic view of the sector, there is no doubt that the ICT has been an important factor during the last years in the context of regional development and structural change. This especially is correct in the case of Northrhine-Westfalia. In spite of many economic problems which still root in the decline of traditional economic sectors like steel and coal mining there are also remarkable patterns of structural change. One prominent example of the latter certainly is the ICT.

1 When we talk about sectors in this report, we refer to production chain in this definition. A production chain is defined as the sum of all production and service functions necessary for developing, producing and marketing a certain product or a group of related products. Product in the context is not only a material product, services are included, too. Beside the production elements of a production chain are those functions preceding and following production, and those necessary to carry out the manufacturing or service process. We use this approach, because it provides a framework to combine the understanding of the sectoral dimension (production chain) and the regional dimension (production cluster) in a systematic way. Following this approach, we see a production cluster as the spatially concentrated parts of a production chain. If all or at least most functions necessary for the development, production and marketing of a product or service are concentrated within a region, we call it an integrated production cluster.

**Industrial Restructuring: The Role of FDI, Strategic Alliances and Technology Transfer in Central Europe’s Automotive Industry**

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Since the fall of the Berlin Wall in 1989, there has been a spectacular political, social and economic change throughout Central and Eastern Europe, as countries have embarked upon the process of transition towards a market economy and away from the state-prescribed command economy. The beginning of the 1990s heralded not only an era of demanding challenges in terms of building a new ideological, political and social system within the region, but it also presented unprecedented opportunities for economic development and investment in a wide range of economic sectors. Nowhere was the potential for development and growth more obvious than within the automotive industry which was vastly underdeveloped, technologically outdated and forecast to be unable to meet the growing demands of the new emerging markets. As foreign direct investment was seen as a key to initiating economic growth and moving towards a market economy, the automotive industry was given high priority by many of the national governments of the region which offered a series of lucrative incentives to encourage foreign investors to alter the industry beyond recognition. This paper will explore the dynamics behind the growth and development of the automotive industry in Central Europe, excluding Russia and the former Soviet Republics. In particular three themes will be explored: foreign direct investment, strategic alliances and technology transfer in helping to bring about regional and industrial restructuring.

Throughout the 1990s the auto industry was transformed on a worldwide basis with the most dramatic changes apparent in Central Europe. Much of the great potential of these emerging...
markets has been realised, as the regional auto industry has witnessed a sustained period of growth and improving sales figures each year despite economic turbulence and uncertainty. The potential market growth and the commitment to investment and development, led primarily by multinationals such as Volkswagen, Fiat, Daewoo and Renault, was fully illustrated when in 2000 the region became a net exporter. Given the saturation of the market in Western Europe and the desire of many key players to expand operations and increase market size, it was only a logical conclusion to focus on Central Europe especially when many of the European Union (EU) membership aspirants, notably Poland, the Czech Republic, Hungary and Slovenia, already exercise closer ties with the EU which grants them expanded duty free export and import quotas for vehicles. Furthermore, with income levels rising throughout the region and a much lower population density than Western Europe for car ownership, there still remains plenty of room for development - even greater than what has been experienced since the 1990s.

What clearly gives the countries of Central Europe an advantage, however, is not only the opportunities for growth and development in conjunction with EU membership but also the fact that the region enjoys a well-educated, highly-qualified and polyvalent labour force with significantly lower labour costs and yet exceptionally high technical capabilities. This has been amply demonstrated in the Czech Republic where the strategic alliance between Volkswagen and Škoda has since produced a solid infrastructure and successful track record with research and development, and come to serve as a model for aspiring investors in the region. In fact, the growth of strategic alliances between partners in the motor industry and the success of the operations, such as those of General Motors at Eisenach, is one of the driving forces that encouraged Peugeot and Toyota’s decision to initiate new research development and production engineering facilities at Kolín in the Czech Republic, representing the largest ever FDI project in the country’s history at 1.5 billion Euro. Furthermore, Hungary’s stable growth and secure political system has meant it serves as a key recipient for investment and development, Poland has the broadest range of car production factories in the world, and Slovenia enjoys the highest per-capita sales of new cars in the region, almost on par with Western Europe yet with a population of around only two million.

Technological know-how, lower labour costs, subsidies and incentives from national governments and loans from the European Bank of Reconstruction and Development and European Central Bank all point towards growth and rebirth in the now globalised automotive industry in Central Europe. This particular industry therefore presents a key example in the framework of regional restructuring where renewed economic structures such as adaptation to changing demands and entrepreneurship are prioritised. A unique aspect of this study is that the Central European automotive industry is also a prime example of a once declining industry which in itself is now a vital growth sector within the emerging transition economies of the region as its once declining firms are revitalised.

The topic of old industrial regions has been studied extensively, and since the 1980s, research in this field has gained in prominence simultaneously to those regions’ factual economic decline. Global technical change as well as changes in demand for industrial goods and the emergence of new competitors from the developing countries of Asia and Latin America drove “old” coal and steel regions into a crisis, that was continually prolonged by their own excessive specialisation and a lack of adaptability. Thus the structural change in the German Ruhr area or in the Rust Belt of the United States covered decades and caused enormous expenses in the form of subsidies and opportunity costs. This process took place under relatively stable political and economic conditions and within the context of democratic states.

Making reference to Gernot Grabher (1993, 1994), I assume that old industrial regions develop path dependently. In the West, scientists and politicians are eager to find out how this path dependency can be overcome and what policy is best suited to enhance adaptability. The objective of structural adjustment, however, is tacitly presumed and serves as a reference point. Within the framework of structural change, these concepts formulate imperatives of action, demanding particular qualities of actors and their ensuing behaviour. Hence, most importantly, the old industrial region paradigm is based on a political and economic model of Western modernity. It implicitly assumes the functional differentiation of different spheres of action and the relative independence of economic, political and social actors.

The aim of the paper is to add a new perspective to the ongoing discussion by applying the old industrial region paradigm to a post Soviet region. The present paradigm, however, has several shortcomings when applied to the post Soviet context. One runs the risk of concealing real processes, as one cannot perceive the actual priorities of actors involved in the transformation process. So far, neither the economic and political transformation processes nor the Soviet legacy have been integrated into the overall framework of analysis. One needs a more holistic framework, which draws upon contemporary theories of transformation and governance.

This paper explores these issues by combining theoretical considerations with a case study. The Donbass in Eastern Ukraine, where a successful restructuring has not taken place, serves as an example. The first part of the paper addresses the structural constraints to reforms, i.e. the Soviet legacy in the economic sphere. The second and main part puts special emphasis on the symbiotic relationship of economic and political actors at the regional level and its impact on regional restructuring. The developments will be interpreted in terms of neo-patrimonialism and state capture (Hellmann/ Jones/Kaufmann 2000).

From the 1920s the region of Donetsk belonged to the Soviet Union and for several decades served as the industrial hub of the country. The Soviet leadership celebrated it as the showcase of socialism, referring to the industrial achievements and the hard work performed by miners and heavy industry workers. The region was tightly integrated into the Soviet inter-republic labour division, but gradually lost its importance to the coal
fields of the Soviet far east. Economic decline set in during the
1970s, but was only noticed by the public during the perestroika
phase. Presently most enterprises in Donetsk region are engaged
in coal-mining, metal and steel production, machine building
and chemicals. The regional share in national production is
about 20 per cent. Large enterprises dominate production and
employment. Throughout the 1990s the relative significance of
heavy industry has steadily increased. Simultaneously many
industrial companies and coal mines are unprofitable and
depend on state subsidies. The region accounts for a third of
Ukraine’s export revenue, with the metallurgy industry covering
much of that volume.

In today’s Ukraine, the economic transformation entailed the
opening up to the world market and increased pressure for
restructuring. But at the same time, the transformation process
is a conflict-ridden redistribution of resources. The privatisation
process in Ukraine was predominantly a nomenclatura
privatisation, which preserved many old vertical ties among
actors as well as their special features. Moreover weak and
hybrid property rights were established that allowed for rent-
seeking and asset-stripping. Overall, one can assume out-right
enrichment by means of quasi-industrial policy.

The empirical findings of this paper are based on in-depth
analysis of the regional discourse as well as political and
economic processes in Donetsk region. The field research
(1999-2000) was conducted within the research project „Local
and Regional Development Policy in Central and Eastern
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References
Grabher, Gernot (1993): The Weakness of Strong Ties: The
Lock-in of Regional Development in the Ruhr Area. In:
Grabher, Gernot (Ed.): The Embedded Firm. On the
Socioeconomics of Industrial Networks, London, New York:
Routledge, pp. 255-277
Grabher, Gernot (1994): Lob der Verschwendung: Redundanz
in der Regionalentwicklung; ein soziooekonomisches
Plaedoyer, Berlin: edition sigma
Hellman, Joel S./Jones, Geraint/Kaufmann, Daniel (2000):
"Seize the State, Seize the Day". State Capture, Corruption and
Paper