Innovation and Institutional Embeddedness of Multinational Companies

Jean Monnet Centre for Europeanisation and Transnational Regulations

(in cooperation with the University of Passau and the Fraunhofer Institute for Systems and Innovation Research)

February 26 and 27, 2010

Location: Senatssitzungssaal, Hörsaalzentrum A14, Raum 1-111, Ammerländer Heerstr. 114-118, 26129 Oldenburg

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Accommodation
The participants will be accommodated at the hotel Altera, Herbartgang 23, 26122 Oldenburg (Oldenburg), **49/441 219080 (http://alteraoldenburg.dyndns.org:542/reserv.aspx). It is located in the centre of Oldenburg. The seminars will take place at the Campus of social sciences and humanities (Campus Haarentor).

Arrival by plane via Bremen
From Airport Bremen (http://www.airport-bremen.de/) take tramline 6 to Bremen Hauptbahnhof (central station). From here please follow instructions below.

Arrival by train/bus via Bremen
In order to arrive in Oldenburg by train you can either take a regional train (RB to Oldenburg or RE to Norddeich (Mole)) or an Inter City train to Emden (faster but more expensive) from Bremen Hauptbahnhof (central station). In front of the main entrance of the central station in Oldenburg take bus line 306 (Universität) and exit at Carl-von-Ossietzky-Straße (terminal stop).
For timetables of the public transport see http://www.vwg.de
For more details please see http://www.uni-oldenburg.de/uni/international/14758.html
The crucial actors of a global knowledge-based economy are multinational companies (MNC). MNC turn into essential protagonists of international innovation processes and organise their Research and Development (R&D) increasingly internationally. They provide important channels for the transfer of technological knowledge across national as well as cultural and institutional borders. Hence, MNCs can be analyzed as international networks for the inner-organisational transfer of technological competences. At the same time, the headquarters of the companies and the competences in the country of origin still play a crucial role for the localisation of R&D. Therefore, the question emerges how MNCs deal with the challenges of internationally distributed innovation processes and to what extent and why they rely on domestic competences and R&D facilities: How can the observed internationalisation of R&D be reconciled with the crucial role of domestic locations and competences? To what extent do MNCs rely on dispersed forms of knowledge production and application and how distributed innovation processes are conceived, coordinated and organised? What are the organisational and institutional conditions which facilitate cross-border innovation projects within the same company and with external partners?

Besides this internal challenge of coping with corporate innovation processes, MNCs are no closed containers of knowledge production, but interact with their environment. To a considerable extent, they depend on the embeddedness in an institutional framework, since their competitive advantage in a world-wide competition also depends on the cross-border utilisation of regional and national capabilities. Complementary to transnational networks, the innovativeness of a company may be based on regional and national innovation systems. Not only the organisational coordination of internationally distributed innovation processes, but also the capability of a company to tap into regional contexts may support the innovativeness of a company: While the internationalisation of a company facilitates cross-border processes of learning, its regional embeddedness fosters the exploitation of sticky, tacit knowledge. The choice between these opposed strategic orientations may also be influenced by political attempts to include MNCs in regional networks and clusters and by the existence or the creation of trust-based relationships between different companies and between scientific, political and economic institutions.

To reconcile the two introduced perspectives on MNCs, the planned conference focuses on two issues: First, on the cross-border organisation of distributed innovation processes and on the strategic choice between distributed and territorially concentrated innovation processes within MNCs; and secondly, on the relationship between organisational and regional arenas of knowledge production and knowledge transfer. In order to enhance the understanding of organisational choices between spatially concentrated and distributed innovation processes and between regionally embedded and disembedded innovation processes, we want to bring together leading academic experts of the debates on MNCs and regional innovation systems.
Friday, February 26th, 2010

9.00 – 9.30 Welcome lecture
Martin Heidenreich (University of Oldenburg)

I. Multinational Companies and Global Value Chains
9.30 – 10.15 Distributed Innovation in Global Value Chains: How to Deal with Knowledge Transfer?
Volker Wittke (SOFI Göttingen)

10.15 – 11.00 Gary Herrigel (University of Chicago) and Jonathan Zeitlin (University of Madison/University of Amsterdam)

11.00 – 11.30 Coffee break

11.30 – 12.15 The Multi-Home Based Multinational: Combining Global Competitiveness and Local Innovativeness
Örjan Sölvell (Stockholm School of Economics)

II. Knowledge in Multinational Companies
12.15 – 13.00 MNCs Between the Local and the Global: Knowledge Bases, Proximity and Distributed Knowledge Networks
Bjørn T. Asheim (Lund University)

12.15 – 13.00 ‘Knowledge Transfer’ and Cross-Cultural Learning: Problems and Chances of Cultural Difference in Learning and Knowledge Processes
Ursula Mense-Petermann and Matthias Klemm (University of Bielefeld)

13.00 – 14.30 Lunch

III. The Regional Embeddedness of Multinational Enterprises
14.30 – 15.15 The Organisational Decomposition of Innovation and Global Distribution of Innovative Activities (working title)
Simone Strambach (University of Marburg)

15.15 – 16.00 MNCs, Clusters and International Collaboration
Philip Cooke (Cardiff University)

16.00 – 16.30 Coffee break

16.30 – 17.15 The Impact of Regional Institutional Arrangements on the Location of MNEs: A European Perspective
Knut Koschatzky and Elisabeth Baier (Fraunhofer Institute for Systems and Innovation Research, Karlsruhe)

19.00 Conference Dinner (provided by JM-CETRO)

Saturday, February 27th, 2010

9.00 – 9.45 Balancing Global Strategies and Regional Embeddedness: Companies in Seven European Regions Compared
Dieter Rehfeld (University of Applied Science Gelsenkirchen)

9.45 – 10.30 The Pôles de Compétitivité: Regional clusters with a French touch
Christoph Barmeyer and Katharina Krüth (University of Passau)

10.30 – 11.00 Coffee break

11.00 – 11.45 High-tech Clusters and Multinational Corporations: Subsidiaries in Political Games
Kristian Hegner Reinau (Aalborg University)

11.45 – 12.30 The Regional Embeddedness of Distributed Innovation Processes in MNCs
Martin Heidenreich and Jannika Mattes (University of Oldenburg)

12.30 – 14.00 Lunch

IV. The National Embeddedness of Multinational Companies
14.00 – 14.45 Simulating the Role of MNCs in Irish Innovation Networks
Petra Ahrweiler (University College Dublin)

14.45 – 15.30 The Contribution of Multinational Enterprises to the Upgrading of National Innovation Systems in the EU New Member States
Rajneesh Narula (University of Reading) and José Guimón (Universidad Autónoma de Madrid)

15.30 – 16.00 Coffee break

16.00 – 16.45 Multinational Companies, Industrialization and Regional Inequalities in Central Europe
Bob Hancké (London School of Economics)

16.45 – 17.30 Closing Discussion
Martin Heidenreich and Jannika Mattes (University of Oldenburg)
**Distributed innovation in Global Value Chains: How to Deal with Knowledge Transfer?**

*Volker Wittke (SOFI, University of Göttingen)*

In many industries outsourcing and off-shoring lead to a new industrial architecture characterized by organizationally as well as spatially fragmented global value chains.

Given this emerging new architecture, the question is how product development, process development and manufacturing are linked in order to organize innovation efficiently. Here, knowledge transfer is the underlying problem in organizing global value chains. The literature on global value chains offers modularity as a solution.

Modularity reduces the necessity to transfer tacit knowledge—and therefore allows the separation of innovation and production. As a result, modular value chains improve the possibilities for extended outsourcing and off-shoring.

However, value chains often don’t have a modular architecture. In these cases of non-modular value chains the process of new product introduction is characterized by numerous feedback loops between product development, process development and manufacturing including the transfer of tacit knowledge. A global distribution of innovation steps and functions is difficult under these conditions. Nevertheless, in industries such as the cell-phone industry we can observe an increasing organizational as well as spatial separation of innovation and production. Whereas product development predominantly is carried out by brand firms in high-wage countries, in the last years mass production has been shifted increasingly to low-cost regions, such as China, Brazil, Central Eastern Europe, and India.

The contribution will present organizational solutions cell-phone manufacturers - based on trial-and-error processes - have developed to deal with this globally divided structure. The contribution is based on evidence from recently finished case studies. Deriving from this case evidence the contribution will discuss general conclusions for the way knowledge transfer can be organized in global value chains.

**The Multi-Home Based Multinational - Combining Global Competitiveness and Local Innovativeness**

*Örjan Sölvell (Stockholm School of Economics)*

In spite of the recent downturn, globalization is here to stay and today most goods, services and factors of production, including capital, technology and skilled people, face global competition. A substantial part of the global flows and power is managed by multinational corporations (MNC), controlling networks of subsidiaries and managing webs of alliance partners and contract partners across the world. The modern MNC is thus entangled in global value chains, with both in-house units and external partners carrying out headquarters (strategy, legal, finance, logistics, HR), R&D, manufacturing (components, subsystems, final products), assembly/packaging, and sales/service operations in multiple locations.

At the same time we have also witnessed a parallel process leading to an increasingly strategic role for particular regional/local environments, i.e. clusters. Clusters have become hotspots for innovation and economic prosperity. In a world of global flows the ‘hollywoods’ or “silicon valleys” of the world have increased their attraction on mobile resources – including talented people (students, researchers, entrepreneurs, inventors and other skilled people), technologies/patents, venture capital, portfolio investments, and FDI from MNCs – from around the world. The more resources and capabilities move around the globe the more specialized and differentiated we expect the world to become. This creates challenges for the modern MNC which must handle both globalization and localization forces in order to stay on the competitive edge.

With globalization and localization forces at play MNCs face numerous strategic and organizational choices. MNCs typically benefit from globalization, selling their products worldwide and utilizing standardized markets for factors of production, input goods and services to enhance overall efficiency of the firm. Localization forces, on the other hand, seem to be more challenging to corporate management: how to locate internal resources and organize in order to be part of the innovation dynamics of leading clusters within their industry?

This paper will explore these two sets of challenges; globalization and localization, and propose a general model encompassing both; the multi-home based MNC model. This model will be contrasted with the general models of MNCs featuring within the IB literature.
MNCs Between the Local and the Global: Knowledge Bases, Proximity and Distributed Knowledge Networks

Bjørn T. Asheim (Lund University)

The strategies and decisions of MNCs of how to organize their R&D work, and where to locate their R&D facilities are contingent upon a number of different structural properties connected to the companies, their products and productions, institutional frameworks and local embeddedness. One important characteristic of companies is the dominant knowledge base(s) of their activity. In my work I distinguish between three knowledge bases: Analytical, synthetic and symbolic knowledge (Asheim and Gertler, 2005, Asheim and Hansen, 2009). Analytical knowledge is science based, and dominates industries such as pharmaceutical, biotech and nanotech. Synthetic knowledge is engineering based, and is typically found in manufacturing industries (automotive, machine tool etc.). Symbolic knowledge is arts based, and figures in industries where fashion, branding and design are of importance. In the different knowledge bases knowledge creation and innovation are carried out in different ways, where the importance of various types of proximity differs significantly. Analytical knowledge is codified and travels more easily than synthetic and symbolic knowledge where tacit knowledge matters most. This means that proximity (spatial as well as social and institutional) is of greater importance for industries based on these knowledge bases than industries relying on analytical knowledge. Analytical based industries applies what Lorenz and Lundvall (2006) refer to as the STI (Science, Technology and Innovation) mode of innovation, while synthetic and symbolic knowledge based industries innovate according to the DUI (Doing, Using and Interacting) mode of innovation as well as the STI mode of innovation. Synthetic based engineering industries makes the distinction between technological development, which is applied research carried out in cooperation with technical universities, where proximity seems to matter (i.e. the STI mode of innovation), and application development, which is the production of the actual artifact (e.g. a dedicated machine tool, a drilling platform etc.) for a customer, where the development takes place in house and in cooperation with suppliers and customers (user-producer relationships). Application development is a typical example of the DUI mode of innovation.

Thus, a multinational, pharmaceutical company will typically organize their research activity along a local nodes of excellence in a global distributed knowledge network structure managed by their corporate R&D headquarter as projects. In earlier phases of new research projects spatial proximity to knowledge exploration subsystems of (regional or national) innovation systems (i.e. universities and R&D institutes) are of importance, which the local nodes of excellence can exploit. In later phases analytical knowledge due to its degree of codification travels easier between the various nodes in the distributed knowledge network. A MNC depending on synthetic knowledge will be more sensitive to spatial proximity to knowledge exploration subsystems but also to customers and suppliers during the whole innovation project. This often means that these companies operate with a multilocal pattern with respect to location of their R&D units depending on where the type of knowledge needed can be found. Typically the knowledge required is very specialized in specific national and/or regional innovation systems, which supports a highly specialized industry. Typical examples will be manufacturing of offshore equipment in Norway, where e.g. 90% of world production of offshore drilling equipment is done by two companies (one American and one Norwegian multinational) located back to back in Southern Norway, or the production of winter sport boots in Montebelluna in Veneto, a typical industrial district in the Third Italy, which is responsible for 70% of total world production, and where the major MNCs is present with their R&D units. This picture is also further influenced by broader institutional frameworks (i.e. varieties of capitalism and national business systems) and degree of local embeddedness (in the case of industrial districts in the Third Italy the fusion of economy and society makes the knowledge very sticky and hard to move). The overall aim of the lecture is to try to make sense of this complicated pattern of contingencies and contexts and presents an analytical framework which is able to explain the behavior of MNCs with respect to how they organize and where they locate their R&D activities.
Knowledge Transfer’ and Cross-Cultural Learning: Problems and Chances of Cultural Difference in Learning and Knowledge Processes

Ursula Mense-Petermann and Matthias Klemm (University of Bielefeld)

Since the middle of the 1980s, studies about Multinational Companies (MNCs) have reported fundamental changes in organizational structure and strategies. These changes are often discussed as transnationalization (Bartlett/Ghoshal 1989; Ohmae 1990; Lane 2001) – transnationalization meaning a strategic targeting towards global efficiency and local responsiveness at the same time, and – consequently – a more dense, cross-border integration of MNCs’ worldwide activities.

Against strategically orientated, functional views on transnationalization as the new one best way of organizing across borders (Bartlett/Ghoshal 1989; Ohmae 1990) institutionalists have argued that national institutional and cultural contexts constantly shape organizational forms and internationalisation strategies (Ruigrok/van Tulder 1995; Whitley 2001). Hence, the debate has mainly focused on the question of convergence versus divergence of organizational structures and strategies in the process of transnationalization.

However, the importance of cross-border transfer of organizational models, work systems and best practices in this discussion (cf. Mueller 1994) has raised the question of how such models are adopted by the different sub-units within MNCs (cf. Kostova/Roth 2002). The focus has shifted from institutional and cultural contexts to the inner-organizational processes of perceiving, evaluating and adopting these models (cf. Forsgren 1990; Kristensen/Zeitlin 2001; Morgan 2001; Ferner et al. 2004; Saka 2004). In other words: the actor is back on the agenda of internationally comparative organization studies.

In our presentation we focus on processes of knowledge ‘transfer’ and cross-cultural learning exactly on this level of inner-organizational interaction. Notwithstanding transnational organizational integration, cultural borders remain – even if they are subject to change in the course of opening and integration into transnational networks.

This question is addressed in our paper: We examine the (success) criteria for cross-cultural knowledge transfer and learning. We have been empirically investigating the processes surrounding the creation of “glocal knowledge” using the example of a transnational corporation and the post-merger integration process of its Czech subsidiary. Using this example we will illustrate that there can be no mention of a simple “transfer” of knowledge. Instead, cross-cultural learning requires complex processes of dis-embedding and re-embedding of “transferred” knowledge being processed in a mode of translation. Using our empirical example, the paper will specify a series of social preconditions that are necessary for a successful process of dis-embedding and re-embedding.

MNCs, Clusters and International Collaboration

Philip Cooke (Cardiff University)

This presentation will analyse rationales for continued MNC involvement in home or host bases in advanced economies. Utilising empirical case-material and touching somewhat on the ‘open innovation’ literature and critique, the presentation will offer three models for consideration and comparison by which MNC domestic and developed host country implanting is currently understandable. The first of these, termed the integrated supply chain (ISP) model is evidenced from the comparison cases of south Ontario, Canada and Konya, Turkey automotive parts clusters. The second, termed the Advanced Aggregator (AA) model refers to regional contexts with ‘Jacobian’ embedded skills, i.e. significant ‘related variety’ whose aggregation or ‘systems integration’ potential is attractive for inward investment as well as rapid indigenous firm growth, notably in ‘cleantech’ industry. California and Denmark are comparators here. Finally, we examine some biotech cases, notably Greater Boston and Cambridge, England, where scientific excellence (SE model) is the knowledge imperative driving geographical and relational proximities, respectively. It is concluded that ‘variety’, notably ‘related variety’ assisting broad or narrower knowledge aggregation ‘platforms’ is a key motivator of MNC ‘proximity capital’ (Crevoisier, 1997) in the contemporary era.
The Impact of Regional Institutional Arrangements on the Location of MNCs - a European Perspective

Knut Koschatzky and Elisabeth Baier (Fraunhofer Institute for Systems and Innovation Research, Karlsruhe)

Multinational Companies (MNCs) are often regarded as footloose in the sense that they act independently from their regional environment. Nevertheless, through their different tangible and intangible interactions with other firms, research institutes, the political and administrative system, with intermediaries, and with the labour market, they are at least to a certain extent linked to their specific regional environments. By exploiting the advantages of the „local buzz“ and regional interconnectedness, also MNCs can profit from locating in metropolitan regions which offer these agglomeration advantages.

With regard to research, development and innovation, the heuristic concepts of national or regional systems of innovation can be used as an analytical framework for the identification of institutional characteristics that explain the locational pattern of MNCs. According to these concepts, important influential factors are the industrial environment, the public research and higher education environment, the political environment, and the market environment. The assumption is put forward in this paper that especially research-intensive MNCs choose locations which provide them with favourable assets for their innovative activities. Using statistical cluster analysis, three regional clusters are identified which exhibit different characteristics with regard to the presence of the different institutional characteristics. Based on data for around 200 European regions it will be shown that MNCs mostly favour capital or metropolitan regions and,industrial regions’ as their locations. We come to the conclusion that according to the functions MNCs and their subsidiaries fulfill, different types of location are preferred. However, lagging regions must be considered as comparatively unattractive locations for MNCs. Although we find evidence that MNCs are somehow regionally embedded, we cannot conclude that they are not footloose. On the one hand MNCs favour certain types of regions, but on the other they have of course the flexibility to move to other locations which offer similar or even better conditions for their economic activities.

Balancing Global Strategies and Regional Embeddedness – Companies in Seven European Regions Compared

Dieter Rehfeld (Institute for Work and Technology, University of Applied Science Gelsenkirchen)

Recently it can be assumed that the window of opportunity is open for a stronger regional position within the global-local balance. This seems especially true in regions that have a cultural setting that is open for the adaption of new strategies and for change. Nevertheless, the companies see the region not as a place with clear boundaries but they are embedded in specific but overlapping functional spaces: the local space that is important for indent and quality of live, the vicinity space, that includes the neighborhood communities where the workers come from and the wider regional space that is important for innovative, often research driven activities. Facing this background, the first part of the contribution gives a detailed picture of company’s regional embeddedness. What functional aspects are most important? What are the interests behind regional activities of companies? What is the geographic space of the different activities? Is there a difference depending on categories like size, ownership, world of production or market orientation? What types of embeddedness can be studied?

The empirical background bases on the results of the European project “Companies culture and regional embeddedness”. The regions that have been studied are different in the intensity they had to face political and economic shifts. 210 companies, local as well as international, have been studied with focus on their activities in innovation, human resources, quality of life and sustainability. The second part focus on the interaction of regional culture and company’s embeddedness. The discussion focuses on the interaction of regional culture and company’s embeddedness. What are the channels or platforms of cultural exchange? What is needed to focus the individual activities of the companies and make them more strategic and sustainable from a regional point of view?

The key problem is that companies prefer short terms activities and projects and hesitate in long standing commitment. Therefore it has to be discussed what the factors are that bring a virtuous circle of dynamic change into live?

In this part the contribution concentrates on the interaction between regional embeddedness and global strategies. It shows that from the company’s point of view the question is not to go local or global but how to balance global and local strategies. The decision underlies strong changes in the course of time and depends strongly on the ability of all regional actors to work out a shared frame where the region has to go and what the distinctive position of the region should be.

Finally, some general conclusions about the rebalancing or regional embeddedness and global strategies will be presented.
The Pôles de Compétitivité: Regional clusters with a French touch

Christoph Barmeyer and Katharina Krüth (University of Passau)

In a globalizing economy, the competitiveness of multinational companies does not only depend on the internationalization of research and development activities and the use of cross-border capabilities. MNCs also need to rely on competencies and resources that are allocated in their regional surroundings. Since innovation often emerges from regional knowledge-based learning networks, an efficient regional environment may play an essential role for MNCs.

The development of R&D activities has been identified as a key factor for industrial competitiveness. As a consequence, strategies of firms are increasingly oriented towards the development of innovative capacities and thus the support of the creation and the diffusion of knowledge. In this context, the French government has launched the program of regional competitiveness clusters, the Pôles de compétitivité in 2005. These clusters are supposed to bring together MNCs, small and medium-sized companies, research centres and educational institutions to conduct cooperative innovation projects within a region.

The aim of our paper is to examine the specific network structures and characteristics of cooperative innovation projects carried through within the Pôles de Compétitivité. We also consider cultural aspects, which reflect the “Frenchness” of this cluster policy, its implementation and functioning. On the basis of interviews conducted with cooperation partners within three clusters, we examine how the Pôle de Compétitivité are perceived by the cluster members: are they seen as an instrument that fosters economic competitiveness, as a structural element that favors regional networking or just as a financial tool that supports innovation projects? Furthermore, we analyze the cooperative strategy of these particular networks, considering the role of the different partners, of personal networks as well as the specific French way about these aspects.

High-tech Clusters and Multinational Corporations: Subsidiaries in Political Games

Kristian Hegner Reinau (Department of Development and Planning, Aalborg University)

This paper explores the relationship between high-tech clusters and Multinational Corporations (MNCs). When MNCs enter high-tech R&D clusters through acquisitions of high-tech R&D companies, the outcome often is that an initial successful phase lasting some years after the acquisition is followed by a closure or a sale of the subsidiary. This tendency has for example been seen a number of times in the NorCOM wireless telecommunications cluster in Northern Jutland, Denmark. This article explores why this course of events occurs in high-tech R&D clusters.

It is argued, using literature on MNCs as social constructions (Dörrenbächer & Geppert 2006), that it is necessary to investigate the socio-political underpinnings of MNCs empirically, if we are to understand how and why such change through time. MNC subsidiaries located in clusters are positioned between “two worlds”. One is the world within the MNC characterized by socio-political processes shaping the identities and behaviors of employees in the MNC. The other is the world within the cluster characterized by a buzz (Bathelt, Malmberg, & Maskell 2004), which shapes the institutions, shared understandings etc. in the cluster. Both of these two worlds influence the dynamics within MNC subsidiaries located in clusters, and hence their evolution. To uncover the dynamics leading to the course of events described above, it is therefore necessary to investigate the socio-political processes occurring in an MNC subsidiary located between two such worlds empirically.

A detailed case study of one such MNC subsidiary in the NorCOM wireless telecommunications cluster was therefore conducted. Detailed case studies are a methodology widely employed in the MNC literature treating MNCs as social constructions. The case study showed, that after the initial successful phase, employees in the subsidiary had to participate in political games about new work tasks and new competences, to claim a position within the MNC, and hence a raison d’être, and the study illuminates the dynamics of this political game in detail.

The contribution of this article is that it shows empirically, that lack of practices related to political games, within acquired high-tech R&D companies located in high-tech clusters, started and driven by engineers focusing on technology rather than political games, can make it difficult for such companies to position themselves within MNCs, and hence claim a raison d’être as MNC subsidiaries. This conclusion is of significant importance to the cluster literature, because focus in this literature is upon the diffusion of technical engineering knowledge within high-tech R&D clusters. This paper shows that it is also necessary to investigate how practices relating to political games are developed and diffused within high-tech clusters. The paper also adds to the literature on MNCs by showing how a buzz within a high-tech cluster can influence the behavior of employees in subsidiaries, and hence the evolution of subsidiaries located in high-tech clusters.
The Regional Embeddedness of Innovation Projects in MNCs

Martin Heidenreich and Jannika Mattes (University of Oldenburg)

The basic credo of regional studies is that the innovativeness and competitiveness of companies might be increased by a closer link with its regional environment, especially by the utilization and advancement of context-specific, tacit knowledge in regional, institutionally stabilized communication and cooperation networks. This has been demonstrated mostly for smaller companies where inner-organizational competences and “economies of scale” can partially be replaced by regionally available knowledge. It is open, however, if and to what extent also multinational companies (MNCs) use the advantages of regional embeddedness. On the one hand, it is claimed that a good regional infrastructure and innovative suppliers, buyers, customers and competitors are a considerable advantage in company-wide learning processes and power and negation relations. On the other hand, the advantages of global learning and innovation strategies are stressed.

In order to investigate the regional embeddedness of corporate innovation strategies, we have analyzed ten innovation processes in French and German MNC. It has been necessary to distinguish between the general regional embeddedness of a company and the project-specific embeddedness. At the general level, MNCs are regionally embedded mostly via the scientific subsystem. Whilst industrial and political subsystems have at least moderate impacts in manufacturing sectors, intermediary organisations (unions, business associations) do not significantly influence corporate innovation. In regard to specific innovation projects, the MNCs do not draw upon potential regional partners or available local collective competition goods, or, if they do so, they assign complete, clearly confined working packages to external participants and do not involve them as egalitarian contributors in the development process.

These findings have important implications for the debate on regional learning. By introducing the distinction between general embeddedness and project-based embeddedness, we can provide a more nuanced picture of what regional embeddedness really is like, and our results remind us to be sceptical: Possibly, the tendency to intermingle the two levels of embeddedness has resulted in a too optimistic picture of regional learning. Although regional learning is certainly possible, it is not a strategic or cognitive resource for MNCs to the predicted extent. Many of the processes which have been analysed as local embeddedness remain at an arm’s length distance, and learning between various actors in the region does not actually take place. The integration of knowledge is a rare event, and the often proclaimed “free” regional spillovers are not exploited in new innovations. Only through the exact distinction between general effects and project-related embeddedness can we derive in which way MNCs really draw upon their regional surroundings, especially in respect to innovation projects. Regarding further research, we therefore need more studies on specific innovation projects which do neither treat MNCs nor regions as black boxes, but provide a comprehensive picture. This also suggests the need for closer collaboration between scholars working in regional and organisational science.

Simulating the Role of MNCs in Irish Innovation Networks

Petra Ahrweiler (University College Dublin)

Before the economic and financial crisis hit Ireland particularly hard, attracting FDI into the country produced enormous growth rates. Since the seventies, we observed a permanent rise of high-technology industries but only fostered by foreign-owned MNCs. These MNCs still show a low integration into networks, clusters, and innovation centres. Accordingly, Ireland is suffering from a dual economy – SMEs with weak R&D and innovation performance, and MNCs with cutting-edge technology providing all the wealth of the country. To prevent MNCs from leaving Ireland for competing manufacturing locations, and to help indigenous industry to benefit from MNCs, Irish policy tries to convince MNCs to locate their R&D in Ireland and to cooperate with Irish organisations (SMEs, universities etc.) in innovation networks. It is important to monitor the impacts and effects of these policies and model scenarios for the national innovation system. In this talk, the agent-based SKIN model (Simulating Knowledge Dynamics in Innovation Networks) is introduced, which builds on empirical research of innovation networks in knowledge-intensive industries with procedures relying on theoretical frameworks of innovation economics and economic sociology. The experiments are set up to simulate the agents of the Irish innovation system and to analyse the impact of the indicated policies. Modelling results can be validated against empirical findings.
The Contribution of Multinational Enterprises to the Upgrading of National Innovation Systems in the EU New Member States

Rajneesh Narula (University of Reading) and José Guimón (Universidad Autónoma de Madrid)

This paper addresses the role of multinational enterprises (MNE) in the upgrading of national innovation systems and the policies that the new member states (NMS) of the European Union (EU) can put in place to enhance it. We use the innovation systems approach as a basis for analyzing policy options and focus on the MNE and the potential for linkages, rather than limiting our analysis to foreign direct investment (FDI) and spillovers. We also deliberately consider the scope and competence at the MNE subsidiary level. These two perspectives are useful in helping highlight the point that the tendency to focus on FDI inflows is flawed, since knowledge exchanges and innovation are establishment level phenomena. Instead, policies should focus on the embedding and upgrading of MNE subsidiaries already present in the country. We argue that this approach requires a closer interplay between FDI, innovation and industrial policies. We also argue that it is more practical for new member states to concentrate on attracting ‘demand-driven’ rather than ‘supply-driven’ R&D, and thus recommend governments to set up programmes that foster demand-oriented upgrading of human capital and public R&D.

Multinational companies, industrialization and regional inequalities in Central Europe

Bob Hancké (London School of Economics)

This paper explores a paradox related to the role of multinational companies in the reindustrialization of Central Europe over the past two decades: whilst multinational-led economic development in Central Europe has taken on a form that we generally associate with a relatively benign productive model, relying on skills and producing regional spill-overs through network effects, sharper regional inequalities across the region are the likely result. The argument is developed in three steps. It starts with the observation that CEE countries have developed comparative advantages over the past two decades which are linked to their initial endowments, institutional development and especially the importance of FDI. In this process of rapid re-industrialization, which was to a large extent led and organized by multinational companies, skill and technology bottlenecks associated with relatively sophisticated product market strategies, have forced these companies to build forms of inter-firm co-ordination in these crucial fields, often supported by international Chambers of Commerce. Agglomeration effects through network externalities then produce highly concentrated high-skill regional manufacturing systems, organized around large multinational companies and their local production systems. The upshot is that these in themselves benign evolutions toward high value-added sectors, lead to increased regional income inequalities as MNCs concentrate their activities in one, mostly Western, part of the country while the mostly eastern parts of the countries remain underdeveloped. If these dynamics hold in what appear to be the best possible circumstances that can be envisaged, then they are a very likely, almost necessary, outcome in other, necessarily less favorable, settings.