Multinational enterprises in Germany have a greater level of local engagement and links to regional innovation systems than those in the UK.

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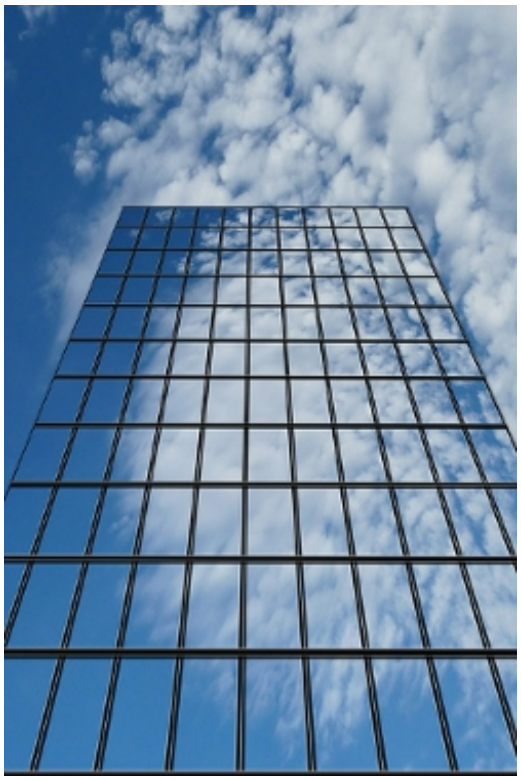
10/04/2013

How can multinational companies be successful and innovative in their operations abroad? Using case studies, **Simona Iammarino** *finds that those multinational organisations that have less centralised structures tend to be more involved with regional innovation networks. Looking at successes in Germany, she argues for more policy initiatives aimed at supporting regional innovation, such as talent management and graduate retention schemes.*

When a multinational enterprise (MNE) sets up a new facility abroad, one thing it considers is the local availability of knowledge resources, such as R&D collaborators and skilled workers. Especially when locating research facilities, MNEs appear to have clear geographical preferences, with R&D strategies aimed to tap into different regional innovation systems to feed new knowledge into intra-firm global networks. And, while MNEs aim to tap regional knowledge resources, knowledge *can* flow both ways, from the MNE to other firms in the region.

Through our case study research, we have found that direct regional corporate engagement with other actors is greater in Germany than in the UK, regardless of whether the firm's home base is Britain or Germany. In the UK, engagement with regional institutions occurs mostly indirectly, through the activities of industry or regional associations to which the MNEs belong.



We studied six leading technology-intensive UK- and Germany-based MNEs, two each in the life science, automotive and ICT industries. We wanted to know how the flow of knowledge and innovation differed on the basis of home country (British vs. German firms, operating in either country), country of operation (subsidiaries located in Britain vs. those in Germany), and type of region (growing regions with high levels of R&D and economic growth, and mature industrial regions). For each firm, we interviewed executives in the headquarters, and in subsidiaries based in both countries. The first aim was to learn more about the link between a firm's own technological capabilities and those present in the region where it establishes a foreign subsidiary; the second was to understand both how they rely upon regional knowledge creation and what they contribute to it. Two key aspects of knowledge creation were considered: the formation of human capital – the skills and capabilities necessary for knowledge creation; and the approaches taken to organizing R&D activity and build innovation networks, both inside and outside the firm.

The interaction of MNEs with regions depends both on the internal organization of the MNE's R&D, and the external conditions in the region. Subsidiaries of companies with more centralized, top-down organization of R&D tend to have less involvement at the regional level, because they have narrower remits. Less centralized organizations produce more bottom-up knowledge flows, and are associated with greater interaction with the local knowledge base. MNEs with a decentralised R&D infrastructure devise their strategy on the basis of the local availability of a critical mass of other innovative public

and private actors. Some firms invest in science parks close to their major R&D location to benefit from local knowledge and/or establish strategic research partnerships with top-universities. Inter-industry initiatives sponsored by MNEs – such as regional research and transfer platforms – are strategies to stimulate local cross-industry knowledge spillovers. Further channels of influence are through MNEs institutional participation as active stakeholders in regional cluster initiatives, chambers of commerce or science advisory boards; and corporate venture capital units, which are often found in knowledge centres.

In the two-way relationship between firm and territory, the key aspects that strengthen MNEs' regional integration are the presence of networking platforms and cluster initiatives, the incidence of regional policy incentives for innovation and, most importantly, the existence of a critical mass of innovative actors. Relative to those interviewed in Germany, those interviewed in the UK seem to be overall less aware of local incentives and initiatives, reporting lower levels of interaction in their relationship with regional institutions and government bodies – again, this was a matter of where the firm was operating, not whether its home base and ownership was British or German.

Those involved in regional development or other local policy initiatives in Britain only rarely adopt a pro-active approach (for instance, by applying for regional funding streams or by sitting on regional boards). Although such differences certainly deserve further validation, they reflect nonetheless regional innovation systems' specific characteristics already highlighted in the academic literature. The higher level of local engagement, by firms operating in Germany, complements earlier quantitative research finding that the MNE operations in Germany tend to engage in more diversified collaborative R&D projects, taking greater advantage of the range of the region's capabilities, while those in the UK were more likely to keep within a narrower remit.

As for skills and capabilities: all the companies studied carry out strategic skills forecasts, monitoring human capital supply in relation to business trends in the medium-long run, and evaluating both entity and cost of future skill-gaps. Sourcing of scientific personnel and recruitment of graduates remains a central objective in the development of MNE strategic partnerships with local universities and, in some cases, the local availability of scientists drives the R&D investment decisions. MNEs feel they benefit from the high inter-firm interregional mobility when based in core locations (i.e. Thames Valley and Cambridge in the UK, or Munich and Karlsruhe in Germany), but experience greater difficulties when mobility is lower and outflows and inflows are unbalanced (i.e. Midlands in the UK, Lower Saxony in Germany).

Meeting both current and future skill needs entails MNE engagement with local educational systems: this includes science awareness programs, promoting enrolment in scientific education from primary and secondary schools, and joint structured graduate programmes. Such engagement sometimes goes further – and does so especially for German-owned MNEs operating in Germany: coordinated efforts with regional policy makers to support regional talent management initiatives; place-branding actions, graduate retention schemes designed for regional labour markets; and corporate universities at headquarters to secure life-long learning of employees.

This article is based on, Iammarino S., Kramer J.P., Marinelli E. and Revilla Diez J. (2012), "Technological capabilities and the regional embeddedness of multinational enterprises. A case study of Germany and the UK", in M. Heidenreich and C. von Ossietzk (eds.) Innovation and Institutional Embeddedness of Multinational Companies, Edward Elgar, Cheltenham UK and Northampton (MA) USA.

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