

Networks in Economic Geography: Exploring Mechanisms and Methods

Research Group Affiliation	Economic Geography Research Group
<p>Within recent developments in economic geography, networks have become a prominent area of discussion and analysis. A whole research perspective called relational economic geography has developed, which focuses on the role of relations among actors and their effects on economic change and development.</p> <p>Although these research efforts were successful in showing the importance of relational dimensions, further progress seems to be constrained by two problems: First, networks are often presented as a <i>static</i> set of relationships neglecting <i>dynamics</i> in two ways: (a) <i>mechanisms</i> of interaction and resource flows in an existing set of relations are often not thoroughly investigated; and (b) the <i>evolution</i> of network structures has been neglected. Second, operationalisations of the network metaphor often remain vague, and economic geography has struggled to find <i>appropriate methods</i> to measure and analyse networks. Whilst a powerful set of methods for relational data has been developed in other social sciences (social network analysis), economic geography is just about to start to exploit this methodical potential.</p> <p>The aim of this session is to discuss approaches that tackle and overcome these shortcomings of networks research in economic geography. Papers address one or more of the following themes:</p> <ul style="list-style-type: none"> - Concrete mechanisms of interaction and resource flows (e.g. knowledge) in networks - Evolution of networks: formation, change and disruption of network relations - Applications of social network analysis in economic geography (e.g. quantitative analysis of network structures and evolution, ego-centred network analysis, qualitative methods for analysing relations). 	
Session Organiser	Franz Huber (University of Cambridge)
Session Chair	Mia Grey (University of Cambridge)

SESSION 1	
Paper 1	Personal networks in the Cambridge IT Cluster: investigating knowledge interactions
Presenter	Franz Huber (University of Cambridge)
<p>The prevalent view in the literature on regional learning and innovation is that firms located in spatial clusters of industries quasi-automatically benefit from local knowledge spillovers. However, despite of the voluminous literature on this topic, “the concept of geographical knowledge spillovers is still no more than a ‘black box’” (Döring and Schnellenbach, 2006, 389) since the actual mechanisms are usually not directly investigated. The paper aims to open the black box and focus on the role of personal networks among knowledge workers for knowledge spillovers. This is based on a survey and qualitative interviews with engineers and developers in the IT industry in the Cambridge high-tech region (UK). First, it will be critically investigated to what extent personal contacts outside of the firm are actually an important source of work-related knowledge. Personal networks will be contextualised vis-à-vis other sources of knowledge showing that personal networks are significant only in very specific contexts. Second, the characteristics of extra-firm personal relations which are most important for gaining work-related knowledge will be explored. To overcome static depictions of networks, the paper will clarify the mechanisms of formation and maintenance of important personal networks and the qualities of knowledge interactions. Finally, the spatial dimensions of knowledge interactions in personal networks will be investigated illustrating that just for few knowledge workers local personal contacts in the Cambridge high-tech region are actually important.</p>	
Paper 2	Business networks in Oxfordshire: scope and effectiveness
Presenters	Helen Lawton Smith (Birkbeck, University of London) and Virahsawmy Malika (University of Oxford)
<p>The presence of both formal and informal networks has been one of the distinctive features in the evolution of the Oxfordshire model of entrepreneurship and innovation. This paper reports on a recent study which identified over sixty business networks. It found that business networks are one of the most important</p>	

means of finding new customers, were important for making contacts with new suppliers, although were less effective for finding new investors. They are, however, only one of a range of means by which business contacts are made, with business referrals also a frequent source of new customers. Differences were found in between sectors in what networks offered. They were particularly effective for creating opportunities in the biotechnology, pharmaceuticals and medical sector, for example for facilitating international collaboration and marketing. Overall, the number of networks was found to be both too many and insufficient in coverage. The main areas where networking could be improved are better coordination between networks, more publicity and information on the content and objectives of events. Thus while business networks in Oxfordshire are plentiful and generally effective, there is scope for improvement in the overall process of delivery, and their importance as a driver of economic development should not be over-stated.

Paper 3	Analysing networks of regional governance
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Presenter	Steve Musson (University of Reading)
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This paper draws on recent research into networks of governance in the English regions. It interrogates the widely accepted (but largely anecdotal) analysis that South East England is politically fragmented and that connections between different parts of the region are weak. Drawing on social network analysis techniques, the paper compares the structure of governance in the South East with those in a range of other English regions. Two sets of conclusions are made, first around the utility of social network analysis as a research method and second about the structure of governance in the English regions.

Paper 4	Related variety, trade variety and regional growth in Italy
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Presenters	Ron Boschma (Utrecht University) and Simona Iammarino (University of Sussex)
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This paper makes an attempt to estimate the impact of regional variety and trade linkages on regional economic growth by means of export and import data by Italian province (NUTS 3) and sector (3-digit) for the period 1995-2003. Our results show strong evidence of related variety contributing to regional economic growth, no matter how growth is defined. Thus, Italian regions well endowed with sectors that are complementary in terms of competences (i.e. having related variety) perform better. The paper also assesses the effects of the breadth and relatedness of international trade linkages on regional growth, as it may bring new and related variety in the region. Our analysis demonstrates that regional growth is not affected by being well connected to the outside world per se, or having a high variety of knowledge flowing into the region. When the extra-regional knowledge originated from sectors the region is already specialised in, it did not positively impact on regional economic growth either. We found, however, some evidence of related extra-regional knowledge sparking off inter-sectoral learning across regions. With respect to employment growth, we could demonstrate that a region benefits from extra-regional knowledge when it originates from sectors that are related, but not similar to the sectors present in the region. Apparently, when the cognitive proximity between the extra-regional knowledge and the knowledge base of the region is neither too small nor too large, real learning opportunities are present, and the external knowledge contributes to regional employment growth.

SESSION 2

Paper 1	Global production networks and the 'dark sides' of strategic coupling
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Presenters	Martin Hess (University of Manchester) and Neil Coe (University of Manchester)
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In previous collaborative work we have conceptualised regional development as being driven by the dynamic 'strategic coupling' of transnational production networks and regional assets, an interface mediated by a range of institutional activities across different geographical and organizational scales. Although a useful conceptual device, our analysis has perhaps underestimated or neglected two aspects. First, strategic coupling in its initial conceptualisation has emphasised positive effects at the expense of negative implications. Second, strategic coupling has been viewed in rather narrow, economic terms, with a tendency to focus on development within, rather than of, the regional territories in question. With these limitations in mind, this paper seeks to move towards a more critical, politicised reading of strategic coupling that recognises the many dark sides of the interactions between global production networks and regional economies. We will consider, inter alia, issues of value; wealth distribution; social, class and gender relations; and the costs and benefits of strategically (de-)coupling in an effort to develop this more rounded perspective. In this reading, strategic (de-)coupling becomes of a field of power and politics, contestation and resistance, and is consistent with a perspective that sees regional economies as both networked and territorial formations.

Paper 2	The evolution of formal network organisations: geographical associational networks 1780-2006
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Presenter	Robert Bennett (University of Cambridge)
<p>This paper assesses the format of formalised networks developed through local business organisations in the modern period from 1780 up to the present. The networks cover collective goods provision, such as lobbying and influence, collective services, and individual services. The chief drivers of such networks have been local chambers of commerce, but a variety of other forms and functions have also evolved as competitors with alternative geographies.</p> <p>The paper focuses on changing geographical scope, scale membership characteristics and stability of memberships using a large scale empirical study and statistical time series analysis.</p>	
Paper 3	Evolution of networks in the biotech industry throughout the industry lifecycle: the role of preferential attachment and proximity
Presenter	Anne ter Wal (University of Utrecht)
<p>This study analyses the process of network evolution throughout the industry lifecycle. Organization and management scholars view the process of preferential attachment, in which central firms tend to become even more central in the network, as the main driver of network evolution. However, various forms of proximity might reinforce or counteract this process. For various reasons both cognitive proximity and geographical proximity increase the likelihood that two firms establish a relationship. This paper tests what role preferential attachment as well as geographical and cognitive proximity have played in the evolution of the inter-firm cooperation network of the biotech industry. In doing so it pays explicit attention to the stage of the industry life cycle. The extent to which geographical and cognitive proximity are important might change over the industry lifecycle, when knowledge evolves from mainly tacit to highly codified. The inter-firm cooperation network is reconstructed on the basis of USPTO and EPO patent data at multiple points in time. The network analysis software program SIENA is used to estimate parameters for all drivers of network evolution by simulating how the network can have evolved from one state into another.</p>	
Paper 4	Cool, Creative and Complex: Exploring social networks and gender in project-based creative industries (advertising) in London
Presenter	Karenjit Clare (University of Cambridge)
<p>The recent literature on the organisation of firms has highlighted the importance of project-based firms. The significance of project-based modes of organizing in new industries has been seen by some as heralding the development of a new 'logic of organizing' in market economies, particularly in the creative industries. However, much of this literature follows a macro-level perspective. In doing so, scholars ignore workers in these industries who are said to be at the forefront of the 'new economy'.</p> <p>Alongside this literature, scholars have highlighted the importance of social networks for ones reputation and career progression. Although, there has been some evidence suggesting that women and minorities have less access to network connections and are often less able to utilise the connections they have, this type of analysis has been absent from the literature on social networks within economic geography.</p> <p>In light of this, I use an interview-based approach to explore working practices in the new economy, particularly in project-based creative industries, where social networks are important and gender differentiations are present. I explore these themes through a case study of the advertisement industry in London in order to show the extent to which men and women's networks differ. Hence, this paper aims to contribute to our understanding of the gendered experiences of men and women working in the new economy whilst drawing on debates about the relevance of spatiality in comprehending work practices in the creative industries.</p>	