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Searching for embeddedness of innovations in rural areas:

a practice turn

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Abstract

This article offers a critical reading of theories on embeddedness emphasized in discussions focusing on innovation in rural areas. A striking characteristic of current innovation studies is a strong emphasis on innovation as a process of interactive learning, characterized by continuous internal and external feedback involving all stakeholder groups such as producers, consumers, suppliers, R&D-institutions, public administration, etc. (Lundvall 1992, Edquist 1997, Morgan 1997, OECD 2002). However, many of these innovation studies are based on empirical evidence from metropolitan areas and urban agglomerations, and they assume a geographical co-location of a comprehensive business milieu and an advanced knowledge infrastructure, such as universities and research institutions. That is why they are for instance not able to capture the specific characteristics of innovation processes that take place in rural areas.

Innovation will have specific content and convention in various contexts. The importance of analysing economic processes within its contextual framework has especially been highlighted among cultural and institutional approaches within economic geography (Wills and Lee 1997, Thrift 2000, Hudson 2003, Amin and Thrift 2002). All economic actions are grounded or embedded in social relations, and the social context or institutional framework for such practice is important in understanding the variety of economic life (Granovetter 1992). Institutions (rules and routines), anchored at various geographical levels, form conditions for economic action, but are also constantly produced and reproduced through such action (Mackinnon and Cumbers 2007). Analysing the economy in such terms also implies that it has to be seen as an act of many goals, from making profit or earning a living to seeking symbolic satisfaction and power (Amin and Thrift 2007). Thus, study of innovation practice has to broaden its approach to examine how these processes operate,

influence and are influenced by sets of sociocultural conventions, norms and values (James 2006).

In this paper, we will illustrate the importance of such contextualization by trying to identify some of the *unique features of innovation practice* in industrial milieus in non-metropolitan or rural areas. Several of the studies that provide such findings, including studies by this author, have been informed by the cultural milieu within economic geography. It has been argued that the complexity of modern economies only becomes apparent when we move outside the traditional territories of economic inquiry. This has led to more diverse and heterogeneous approaches to the study of the economic landscape (Hudson 2003). However, such cultural and institutional approaches within economic geography have been criticized for lacking a transparent and robust methodological approach. Markusen (1999) suggests these studies contain sloppy theorizing, fuzzy concepts and a failure to address questions of methodology, while Martin and Sunley (2003) are concerned about a drift towards vague theory and thin empirics. Thus, in this paper we outline a methodology that we believe has the potential to grasp the multi-scale characteristics of innovation practice, proposing two main changes to the dominant approaches within innovation studies:

i) The need for a practice turn. Studies of innovation call for a stronger focus on the practices that constitute them, and a stronger confrontation with the complexity of managerial and organizational action. Broadly stated, practices are the everyday relational processes that constitute economic action and industrial communities, and which help organize and sustain industries, economies, regions, and firms. Practices reflect the knowledge held within places, regions, and professional or industrial communities, knowledge that is often only tacitly realized in the “doing” of economic and business activities. Context, social meaning, and identity are central to interpretations of practices such as learning and innovation, and power plays a key role

in determining which actions are appropriate, who is a legitimate participant in practice, and to what degree norms, routines, and conventions can be differentially interpreted, transformed, or ignored.

ii) The need for a multi-scale approach. Practices are spatially and temporally embedded within or in relation to particular places, scales, networks, institutional structures and power hierarchies, and they demonstrate the complex and contingent ways in which firms, industries, and economies function and interconnect in the global economy. We will introduce a social field approach that we argue can handle the challenge of mapping multi-scale and multicultural forms of embeddedness, and its significance for economic performance and economic development in rural areas.

Searching for embeddedness of innovations in rural areas: a practice turn

I Introduction

The question of how processes of innovation will be shaped by their spatial and cultural embeddedness in various contexts has been the subject of intense theoretical debate in recent years. The importance of analysing economic processes within their contextual framework has especially been highlighted among cultural and institutional approaches within economic geography (Wills and Lee, 1997; Thrift, 2000; Amin and Thrift, 2002; Hudson, 2003). This literature has increasingly determined that economic actions, including innovation practices, are grounded or *embedded* in social relations, and that the spatial and cultural context or institutional framework for such practices is important in understanding the variety of economic adaptations (Granovetter, 1992). The majority of innovation studies are based on empirical evidence from metropolitan areas and urban agglomerations. As such, conventional innovation studies are not tuned to capture the specific characteristics of innovation processes that take place in rural areas. Rather, they assume a co-location of a comprehensive business milieu and an advanced knowledge infrastructure, i.e. universities and research institutions, as requirements for innovation. In our opinion, it is a mistake to view rural areas as separate from the creative urban economies. Rural capitalism's adaptations should not be treated as non-innovative, even if they lack most of the institutions characterizing innovation systems in urban areas. They are, as all local capitalist adaptations, maintained and reconstructed as part of continuous processes of change. At present, globalization interferes with rural development through the integration of rural places in worldwide flows of capital, people and knowledge, forcing economic actors in rural capitalism to be creative if they are to survive increased international competition.

A stronger emphasis on innovation when analysing competitiveness of rural capitalism adaptation means that studies of innovation practice have to broaden their approach. An examination of the specific embeddedness of innovation processes that take place in rural areas involves an investigation both of how these processes operate in space, and how they influence and are influenced by spatial sets of sociocultural conventions, norms and values (James, 2006). The few studies that provide such findings have been informed by the cultural milieu within economic geography. It has been argued that the complexity of modern economies only becomes apparent when we move outside the traditional terrain of economic inquiry (Hudson, 2003). Such cultural and institutional approaches have been criticized for lacking a transparent and robust methodological approach. Markusen (1999) argues that these studies are characterized by sloppy theorizing, fuzzy concepts and a failure to address questions of methodology, while Martin and Sunley (2003) are concerned about a drift towards vague theory and thin empirics. In addition, they have been accused of linking embeddedness to local or regional levels without reservations, and for viewing it as a phenomenon that promotes innovation per se. Accordingly, new contributions have tried to re-introduce the importance of “extra-local linkages” (Grabher, 2002), and stressed how geographical and sociocultural embeddedness can also lead to path dependency and lock-in (Fløysand and Lindkvist, 2001).

We endorse some of the criticism towards the lack of a transparent and robust methodology in studies inspired by the cultural/institutional approach. There is a need for sharpening and deepening the practice and methodology of such intensive research to collect better evidence on the complexity of innovation processes. In this paper, we will illustrate the importance of contextualizing innovations by developing a methodology to identify the multi-level and unique features of innovation practice in rural areas. We emphasize the need to elaborate the *practices* of economic actors, and to show how such practices are anchored or

embedded in systems and networks of various scale and scope. Broadly stated, practices are the everyday spatial interactions that constitute economic actors and industrial communities, and which help organize and sustain firms, industries, economies and regions. As such, practices reflect the geographical and cultural embedded knowledge held within firms, industries, places, regions and communities. Such knowledge is often only tacitly realized in the “doing” of economic and business activities. A *practice turn* means that the socio-spatial context is central to interpretations of economic practices. Spatial processes of learning and innovation and hegemonic networks play a key role in determining what actions are appropriate, who is a legitimate participant in practice, how norms, routines, and conventions can be differentially interpreted, transformed, or ignored, and so on. Accordingly, we suggest that a practical turn has to be combined with a multi-scale understanding of economic practice. Thus, we argue for a methodology based on the concept of *social field*. Practices are spatially and temporally embedded within or in relation to particular economic actors, places, scales, networks, and institutional structures. The embeddedness of actors in systems of social fields of different scale and scope demonstrate the complex and contingent ways in which firms, industries, and economies in rural areas function and interconnect in the global economy.

The next two sections offer a critical reading of theories on embeddedness of industries (Section 2) and a discussion on how theories on innovation practice can be adjusted to fit rural areas (Section 3). This is followed by a presentation of a methodology searching for multiple embeddedness of innovations in rural areas based on a practice turn and a social field concept (Section 4). Finally, we discuss in more detail application of the methodology and how findings from such studies can contribute to the theory of innovation studies (Section 5).

2 Embeddedness of firms and industries

Contributions within the cultural/institutional approach in economic geography claim that geography matters (Amin and Thrift, 2002; Pred and Watts, 1992; Massey, 1994). Dicken and Thrift (1992) stated that organizations are produced through a historical process that produces an interaction embedded in specific cognitive, cultural, social, political and economic characteristics of the home territory of organizations. This implies that different forms of embeddedness are important for economic performance. While embeddedness may refer to both material conditions (such as proximity, regions, districts, and clusters) and immaterial conditions (such as culture, knowledge, and shared understandings), there is little distinction in the literature between geographical and cultural embeddedness. Thus, arguments that highlight the significance of embeddedness for the performance of economic agents and for local economic development are twofold. Shorter physical distances between participants make interactive collaboration cheaper, and assist firms to share knowledge and communicate face-to-face (Maskell *et al.*, 1998). Economic geographers also claim that even if globalization, in the form of “time–space compression” (Harvey, 1989), has disrupted established geographical patterns of economic relations and reduced space-related costs, firms continue to be embedded in particular regions for sociocultural reasons (Fløysand and Lindkvist, 2001). This discussion of embeddedness has been rooted in the classical work of Polanyi (1944) and especially the analysis of Granovetter (1985). Polanyi demonstrated how the economy is enmeshed or embedded in other institutions, and he discussed a varying degree of separation between economic and non-economic institutions during history. The central insight of Polanyi’s work is that the market is socially constructed, and not a natural given form. Thus, organization in such a system depends on its institutional environment. Granovetter’s intention was to avoid both the under-socialized view of economic action in neo-classical economics, and the over-socialized views of classical sociology. While Polanyi

offered a macro perspective, Granovetter managed to scale down the embeddedness concept towards an emphasis on the agency of individuals and organizations. For him, embeddedness refers to the ongoing contextualization of economic activity in existing patterns of social structure and relations.

The concept of embeddedness has also informed studies of industrial districts and clusters within economic geography. Numerous studies of industrial districts have been carried out. Best known are the studies on the Third Italy by Brusco (1982, 1986), Piore and Sabel (1984) and Beccatini (1990). The essence of these studies is an elaboration of the term “localization economies” in contrast to urbanization economies. According to Brusco, this implies a focus not on the single firm, but on the characteristics of the district in which the firms are embedded. Analysis should concentrate on the progressive specialization of firms working in the same sector in the same area, producing many externalities that may benefit other firms. Other studies of clusters, using the concepts of “new industrial spaces” (Scott, 1988) and “local milieu” (Crevoisier and Maillat, 1991), have also focused on embeddedness to explain patterns of economic growth. The interdependence between firms and their regional environment is emphasized. The need for taking into account the importance of social ties is held to be paramount in these approaches. In this way, industrial embeddedness is an expression not only of economic conditions, but also, according to Pyke and Sengenberger (1992), of the broader social and institutional aspects. What is important is that the embeddedness of interdependent firms may develop collective capabilities, depending on the culture in networks and other relationships among local firms (Fløysand and Jakobsen, 2002).

Despite its popularity, embeddedness is a problematic and in many ways fuzzy concept. Firstly, the literature in economic geography and regional studies has too narrowly equated embeddedness of organizations with linkages that are economic and local, and with the notion that increasing local embeddedness is inherently beneficial. However, organizations are based

on a multiplicity of linkages and institutions that stretch beyond the local territory.

Knowledge is distributed in more or less distanced relations, some local, others external (Amin and Thrift, 2000). Secondly, there is also a tendency within the debate toward a static understanding of embeddedness. Organizations are supposed to be either strongly embedded within a network or a system, or they are supposed to be outside such a network. In a world of constant flux, the spatiality of organizations is always changing, which implies that the embeddedness structure of an organization is temporary, and also more or less in a state of flux (*ibid.*). Thirdly, there are also problems within a recent stream of research portraying a dichotomized understanding of embeddedness. The work of Giddens (1991) for instance highlights the disembedding power of globalization. Giddens describe disembeddedness as a state where social relations are detached from their localized context of interaction. However, other studies emphasize that globalization is not a process of disembedding, but rather a process of transnational embedding, creating and maintaining linkages at various interrelated geographical scales. Swyngedouw (2004) argues that the globalization of a milieu or an industry should be seen as a form of recasting of social, political, and economic processes both “upwards” and “downwards” in scale, rather than being reduced to an up-scaling of processes from the local to the global scale. He advocates a dialectic understanding between processes of time–space compression and changes in local adaptations. Embeddedness has no simple geographical connotation, but is defined by reciprocal, social, cultural, political and economic processes that occur at multiple scales (Hayter, 2004). We will follow these lines of thought in developing a methodology for the multiple embeddedness of innovation practice.

3 Innovation in rural areas

The notion of embeddedness has been further elaborated within the literature of innovation (Edquist, 1997; Amin and Cohendet, 1999; Maskell and Malmberg, 1999; Cooke, 2001).

Inspired by the cultural/institutional approach and evolutionary economics, there are studies of national, regional and local innovation systems focusing on innovation as interactive learning, characterized by continuous internal and external feedback. This interactivity refers to competition and collaboration between producers, costumers, suppliers, R&D institutions, and public administration (Lundvall, 1992; Edquist, 1997; Morgan, 1997; OECD, 2002).

Various studies have elaborated the importance of the cultural, economic and institutional environment on firms' innovation performance, and the effect of geographical embeddedness between organizations on the transmission of information and knowledge (Cooke *et al.*, 2004; Asheim and Gertler, 2005). Geographical co-location of a comprehensive business milieu and an advanced knowledge infrastructure, i.e. universities and research institutions, is particularly stressed as essential for innovation.

At the core of the innovation studies stands the recognition of knowledge as a key driver for entrepreneurship and innovation. Access to and the possession of knowledge, and its creation and dissemination, may act as a critical factor for regional innovation and growth (Shane, 2004). Studies have illustrated that growth is stronger and the diffusion of knowledge quicker in specialized agglomerations or clustering of firms due to knowledge spillovers (Audretsch and Feldman, 1996; Baptista and Swann, 1998). Within these studies, there has been a tendency to portray innovation as less advanced in rural areas than in metropolitan areas. It is commonly hypothesized that limitations in resources, knowledge and capabilities primarily correlates with low levels of innovation, resulting in poor rates of development of new products, technologies, significant processes, efficient modes of organization, markets, etc. Radical innovations are linked to the dynamics of metropolitan areas due to the strong supply of institutions and multilevel networks, capital, firm structure, etc. in these settings. Rural areas are at best seen to develop only incremental innovations, since they are associated with institutional thinness, localized networks, a lack of investors, SMB dominance, etc.

(Table 1). However, these studies of innovation have been informed by empirical evidence from urban areas, fostering an innovation policy that gives high priority to urban actors and their formal knowledge. This empirical bias has triggered innovation policy in rural areas to mould innovation systems there as copies of innovation systems in metropolitan areas (changes towards more TNC involvement through FDI, more collaboration with R&D institutions, etc.). However, by doing this they overlook the unique feature of innovation practices in rural areas.

Table 1: Characteristics of innovation in metropolitan and rural areas.

<i>Characteristics</i>	<i>Metropolitan areas</i>	<i>Rural areas</i>
Type of innovations	Radical	Incremental
Hegemonic actors	TNC/large companies dominance	SMB dominance
Funding	Mature financial system	Lack of investors
Scale	Multi-level networking	Local networking
Specialization	Flexible/strong	Weak
Type of knowledge	Research-based	Applied
Structure	Institutional thickness	Institutional thinness

Newer contributions, inspired by the cultural/institutional approaches, have paid increased attention to the informal and more practical “know what/who/when/where and how” of individual firms and their respective milieu. Ray (1998) stresses what he calls cultural markers as important resources in rural areas. These consist, among other things, of traditional craft, local foods, literature, idiosyncrasies of landscape, and many more. Murdoch *et al.* (2000) emphasize the different forms of producing and bringing products onto the market by applying Salais and Storper’s concepts of conventions (1992), whether the product is standardized or specialized, generic or dedicated. The latter is nearest to cultural markers as described by Ray (1998). Dedicated production processes and products are thus the most territorially embedded, and quality rather than quantity is their hallmark.

Atterton (2007) has argued that informal social networks have traditionally been stronger and more important in rural than in urban areas. Halfacree (1994) points to the fact that social relations in rural communities have retained a distinctive cultural and spatial dynamic. In broad terms, social networks in rural areas tend to be small, dense and homogeneous, and are often based on kinship and neighbourhood. They also tend to be characterized by multiplicity, in terms of the multiple roles played by participants (Beggs *et al.*, 1996). Monsted (1995) has also argued that the strength of informal or social networks in rural areas makes the overlap of professional and personal or social ties highly complex. Fløysand and Jakobsen (2007) demonstrate how a professional football club can take a leading role in processes of local restructuring in rural areas through networking. The club has benefited from dense and trust-based linkages between hegemonic actors in the community with multiple roles. The networking practice in this community is so sophisticated that it has almost become an art. Still, Philipson *et al.* (2006) have stressed that a local network is not identical to formal cooperation between firms. He says that such trust-based networks seem to form the foundation for formal cooperation. Local social networks form a latent structure that

incorporates the potential for collective action and is manifested in the local milieu. A strong capability for such collective action is emphasized in other studies of rural areas. In a study of innovation systems in non-metropolitan areas, Doloreux *et al.* (2007) highlight the importance of an informal support structure devoted to entrepreneurship. In addition, partnerships between firms, institutions and local governments are frequent in such areas, making it easier for the partners to tap into various resources and external funds. The intensity of local networking will also differ according to firm or manager attributes. Kalantaridis and Bika (2006) illustrate in a study of entrepreneurship in rural areas that immigrant entrepreneurs rely less upon local networks and resources than their locally born counterparts, and more on national and international sources of information and knowledge.

Studies of rural areas have also illustrated that the outcome of local networking and its impact on local development can differ in various cases. Atterton (2007) illustrates that in some cases the strength of local social networks can even hamper the development of local firms and the local economy. Still, the positive features of such strong localized, embedded networks, i.e. high levels of trust and loyalty, can be viewed as resources to be drawn on in processes of restructuring. Uzzi (1996) has advocated that despite local networking offering positive gains in terms of trust and information, it can also seal firms off from wider sources of information, resources and opportunities. Grabher's (1993) studies of how strong local ties between firms in a local milieu can facilitate growth through collective action in one phase but could lead to "lock-in" and entropy in another are well known. An important lesson to learn from this observation is that studies of local milieus need an historical or evolutionary perspective, emphasising history as a process of cumulative causation influenced by dominant values in the society (Mackinnon and Cumbers, 2007).

In studies of networking, there is a danger of being too focused on localized processes and neglecting the importance of external linkages. Local milieus rely on multiple institutions

and connections, which not only stretch beyond the local milieu, but actually play an important role in constituting them (Amin and Thrift, 2002). In a study of fishery clusters in rural areas, Fløysand and Jakobsen (2002) illustrate the importance of participating in both local and extra-local networks. Local milieus that are participating in social networks at different geographical scales seem to be more successful in creating firm-level capabilities than milieus dominated by either external influence or a local competence base. Uzzi (1996) found that a balance of local and arm's length ties was an ideal situation. An over-reliance on local embedded networks could make the firm insular, or prevent it from adapting to market and technological strategies that lie outside the local environment. All these findings go along with the theoretical framework developed by Boschma (2005), who distinguishes five dimensions of proximity: geographical, cognitive, organizational, social and institutional. Innovation appears to be connected to a balanced combination of these, and too much or too little proximity leads to unsatisfactory innovation profiles for territorial production systems. In a study by Lindkvist and Sanchez (2008), this discussion is clearly developed with the empirical comparison of two localized natural resource-based production systems. Salted-fish production in Norway is too enclosed or embedded into local social environments, and usually reluctant to seek external knowledge from scientific institutions. Nevertheless, the wine industry in the Spanish region of Castilla y León has developed a competitive regional innovation system which connects local producers to the demands of the quality markets; the adoption of the Protected Designation of Origin system (PDO) provides a path for the upgrading of the whole production chain, and is rendering very positive social, environmental and economic outcomes for the involved territories and communities. The study illustrates that an essential part of the value-creating activity in rural areas is related to local industrial milieus that are export-oriented, which means that actors in these areas are influenced by

developments on international markets on a daily basis. Simultaneously, they are influenced by practices at the local and national levels.

4 Searching for the embeddedness of innovations in rural areas

1 Introduction

The above literature review demonstrates that the concept of embeddedness has been placed at the forefront in several studies of innovation. This focus means that the sociocultural context has become increasingly central to interpretations of innovation practices. The main emphasis within conventional studies of innovation has been to link the embeddedness of economic actors within local networks and localized social relationships. It has been argued within this literature that spatial proximity between actors facilitates the development of trust-based relationships (Maskell and Malmberg, 1999). However, globalization implies that established geographical patterns of relations have been shaken up. The result is a form of recasting of socio-economic processes both “upwards” and “downwards” in scale that enables the development of new modes of organizing and new geographical patterns of embeddedness in rural areas (Swyngedouw, 2004). Hence, an analysis of the significance of embeddedness for the performance of economic actors and for economic restructuring needs to examine the persistence of relations between agents and the specific tasks that are completed by undertaking the associated practices. In the following section, we will outline our methodology for understanding such dynamics. Our refined methodology for conducting intensive research rests on two components. Firstly, we argue *for a practice turn*; secondly, *for a multi-level approach*. We end the session by illustrating how increased time–space compression links to the social field systems of a rural area.

2 A practice turn

Newer studies of innovations call for a stronger focus on the practice that constitutes them,

and a stronger confrontation with the complexity of managerial and organizational practice. Broadly stated, practices are the everyday relational processes that constitute (economic) action, firms, industries, economies, regions, etc. The challenge in innovation studies is to integrate reflexive and dynamic interacting economic actors in a theory of social practice. As a starting point, social practice can be defined as *interaction* between two or more actors that is characterized by overlapping processes of transaction and signification or interchange of «goods» and «signs» (Figure 1). The purpose of interaction can, for example, be to confirm the actor's identity (of gender, place, profession, etc.), her position (social, political, economic, etc.) in a firm, place and society, and how far she is motivated by the pursuit of economic profit. Obviously, interaction has to be based on subjective knowledge of what is appropriate role conduct, or on knowledge that regulates how processes of transaction and signification should take place. As such, interaction in economic affairs reflects subjective knowledge held within places, regions, professional groups or industries. Such knowledge is often only tacitly realized in the “doing” of economic and business activities. Accordingly, subjective knowledge becomes central to interpretations of economic practices such as learning and innovation. It plays a key role in determining what actions are appropriate, who is a legitimate participant in practice, and to what degree norms, routines, and conventions can be differentially interpreted, transformed, or ignored.

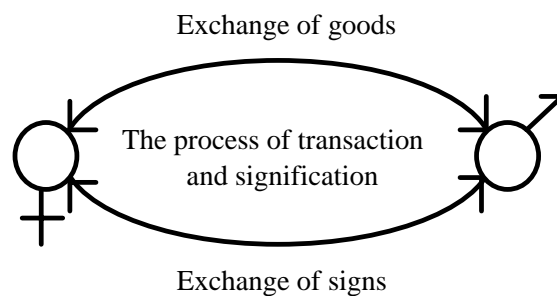


Figure 1: Social practice as exchange of goods and signs.

Economic interactions are spatially and temporally embedded within or in relation to particular places, scales, networks, institutional structures, and power hierarchies and they demonstrate the complex and contingent ways in which firms, industries, and economies function and interconnect in the global economy. An *actor* can be treated as synonymous with a social person, which by definition equals the total number of statuses an individual possesses. A status is a social position of rights and duties that functions as incentives and limitations on role conduct (Linton, 1936). This means that, for a given status combination such as employer–employee, there exist social roles that are legitimated through shared expectations of role conduct. Such expectations are based on subjective knowledge of what is appropriate role conduct in the interaction, or on agreements that regulate how goods and signs should be interchanged. On this basis, *economic practice* can be interpreted as interaction between actors operating in status combinations, in which they construct, maintain and change the processes of interaction in line with the role conduct they can legitimate in a given sociocultural and spatial context (Aase, 1997).

Different concepts have been used to describe such spatial and sociocultural interaction systems. Grønhaug introduced the concept of a *social field*, “a relatively bounded interconnected system of social relations stretched out in socio-space” (1974, 1978). DiMaggio and Powell apply the concept of an *organizational field* consisting of “those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar service or products” (1991). According to Scott, “The notion of field connotes the existence of a community that partakes of a common meaning system and whose participants interact more frequently and fatefully with one another than with actors outside of the field” (1988). This means that such fields consist of “embedded” relations that structure the practice of rural capitalism. The members of a field need to share common ideas and

values (inter-subjective knowledge) in order to interact. Then, the notion of culture can be a helpful theoretical abstraction in the analysis of economic practice. Culture can be defined as a subjective system of knowledge that people use to interpret experience and social practice, and to generate new practice and knowledge. If this definition of culture is connected to the concept of social fields, it can be argued that social fields contain *patterns of behaviour*. In such fields, economic actors (key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar service or products) take on conduct that is legitimated through shared expectations (inter-subjective systems of knowledge). This means that culture can be directly confronted in our analysis of rural capitalism innovation practice.

3 A multi-level approach

The main theorem of our methodology is that economic actors in rural capitalism adaptations are embedded in a spatial system of social fields. The concept of a social field is informed by the social network literature (Granovetter, 1985; Burt, 1992). Networks become a social field when a task-solving network system that produces, maintains or changes individuals and society emerges (Grønhaug, 1974, 1978). Hence, a social field represents a particularly dense pattern of social relations that constrain and enable the agency of actors. A field, or a network system, consists of a number of actors or nodes that are linked by various social relations. In addition, each field is connected to other fields through individual and collective linkages and relations. The concept of a social field highlights both the structure and the content of such social network systems. The physical structure, or “geographical embeddedness”, of a social field, in terms of the historical and geographical scales of a field, is empirically defined by referring to the number of actors and their relations in a particular social field, and their distribution in time and space. Hence, the scale of a social field is defined by the number of actors involved and their extension in socio-physical space (Fløysand and Jakobsen, 2002,

2007; Fløysand and Sjøholt, 2007).

The content of a social field is related to how it both constrains and enables the agency of actors. In the network literature, there is an emphasis on how the attitudes and behaviour of actors are strongly affected by the production of knowledge in such networks of relationships (Nohira, 1992). Networking involves sharing knowledge, building trust and developing shared rules and subjective meaning. The existence of interpersonal trust in dense networks means that actors are more willing to get involved in risky operations without fear of sanctions from outsiders. It also makes actors more willing to act as a group in support of common, mutually beneficial goals, reducing the possibility of individual opportunism (Gordon and McCann, 2005). Further, it has been argued that shared practices and conventions between co-located actors can create a culture for cooperation that is an important asset in the process of regional development (Amin and Cohendet, 1999). Such untraded assets illustrate some of the cultural embeddedness of a social field. In each social field, social practices produce the inter-subjective knowledge used by field members to interpret, maintain and generate new knowledge (Fløysand and Jakobsen 2002, 2007; Fløysand and Sjøholt, 2007).

The production of knowledge in the form of untraded assets, such as informal rules of conduct, provides an example. Rules of conduct can be formal as well as informal. Formal rules include contract-based rights and employee obligations to employers, and rules of governance implemented by political regimes. Informal rules include the above-mentioned conventions that can be defined as practices, routines, agreements and associated informal and institutional forms (Murdoch *et al.*, 2000). Among these are shared expectations in the time-space of a community about firm management. Thus, managers of local firms may consider the needs of the community in developing their firm strategy, even if this reduces profit. Status, possessed by, for example, the manager of a firm, is global, but the practices

associated with that status are based on the cultural embeddedness that constrains and enables the agency of actors.

Finally, social fields are interrelated. The practice of individuals, or the “practiced setting” of a social field, must be analysed by referring to individuals’ positions within a certain field and the status of this field compared to other relevant fields, that is, the hegemonic social field versus the non-hegemonic social field. Social fields are interconnected in the sense that different levels of status are incorporated in each actor, with each forming part of the totality of fields making up the actor’s relational space (Fløysand and Jakobsen, 2002, 2007; Fløysand and Sjøholt, 2007). Firms (actors) or groups of firms (industry milieus) are embedded in a wide range of social fields. Accordingly, firms have relations in several social fields simultaneously. They are situated in a system of fields comprising fields of different untraded assets on different geographical scales. For example, some firms are embedded in local social fields constituted by local specialized suppliers, and depend on global fields of customers and non-specialized suppliers. Some firms may be embedded in systems of global fields that leave little room for establishing relations with local firms. In this case, networking within the firm is unimportant, and local raw materials and the specialization of the local labour market and service supply may represent the only economic benefits of the region. Other firms may be strongly embedded in local social fields, promoting local innovation and regional development.

4 The dynamics of field systems in rural areas

The field system of what is termed a “local” situation and what we may term a “glocal” situation, that is, a system combining local and global elements, gives an illustration of how globalization in terms of time–space compression affects the field systems of a rural place (Figure 2). The dot in the figure represents an actor. The ellipses indicate social fields of different scale. It can be claimed that construction of social practice takes place in social

fields at a local scale in traditional rural societies. In Table 1, this is illustrated by a field system we have termed a “local” situation. At present, globalization interferes with rural development through world-wide processes of integration. Under such circumstances, we can expect that construction of social practice takes place in social fields on a wider socio-spatial scale. We would also expect that globalization means increasing complexity, or that people participate in a greater number of relatively independent social fields at different scales than they do in a typical “community” situation. In general, we would expect that time–space compression implies that rural actors are becoming more integrated in wider time–spaces. We would also expect that the time–spaces of actors in present society are increasing in complexity because, among other reasons, actors participate in a greater number of networks/social fields at different scales that are less interrelated in comparison with a “local” situation. In Figure 2, this is illustrated by a field system we have termed a “glocal” situation.

A methodology based on the concept of social fields implies that economic actors take part in various fields (family relations, community relations, economic relations, political relations, etc.) on different scales. The number of relations involved and their extension define the scale of a social field in time and space. Practices and processes in fields function as “constraints upon and opportunities for action by” economic actors (Kalberg, 1994). Since economic actors take part in a variety of social fields on different scales, rural capitalism adaptations can influence and be influenced by practices and processes in micro- as well as macro-scale fields. This implies that the embeddedness of rural capitalism does not have to be “local”, but it is nevertheless situated in time and space. An important implication of the methodology is that the time–space scale and the knowledge production in terms of role conduct in social fields influencing economic practice of a given firm or industry, as well as the interrelations between fields, becomes an empirical question. The number of social fields

and their distribution in time–space, cultural content and relative power has to be described empirically, as we show below.

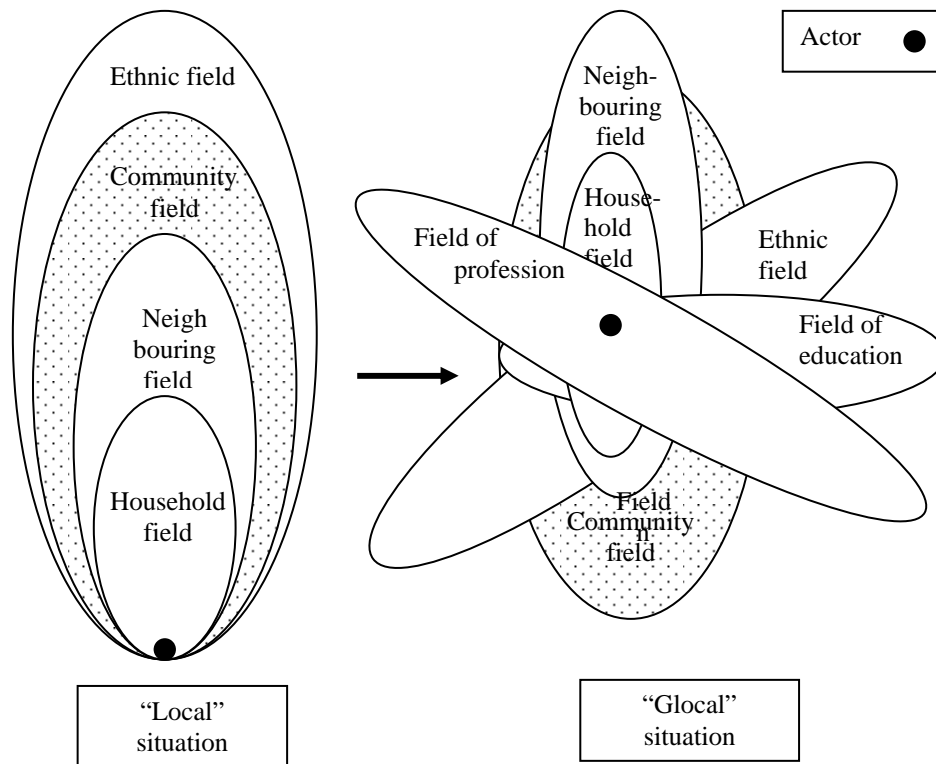


Figure 2: The field system of a “local” and a “glocal” rural area.

5 Applying the methodology

Most of the literature discussed here bases its findings on case studies and qualitative methods. Some of the critique of cultural/institutional economic geography seems to rest on scepticism about the value and legitimacy of such case studies and qualitative methods (e.g., Markusen, 1999). There has been a lack of transparency and clarity in the discussion of methodological design, and it seems quite clear that the methodological components of the “cultural turn” seem to lag behind (Peck, 2003; Young, 2003; James, 2006). We agree that methodological issues deserve more attention than has been given, but such discussion has to

be based on recognition of the validity of both qualitative as well as quantitative evidence. This will be illustrated in the following paragraphs by presenting the methods and findings from different case studies applying the social field approach.

The departure for a field analytical approach will always be on innovative practices. In our case, it will be practice in the form of innovative activities in rural areas. The research problem will be to sort out how innovation processes will be shaped by their spatial and cultural embeddedness in rural contexts. A study applying the social field approach needs to produce an overview of the social field system in which the economic actors take part, the appearance of intangible resources in these social field systems, and how the interaction in the field system influences innovative capability in the area. Normally, this means that several techniques for data collection are combined. The first step will be to expose the “biography” of the place. An analysis of the development of social fields and their embeddedness and value orientation starts by giving an overview of the industrial history of the place in question, and how the industry has evolved over time. It involves interpreting statistics and secondary data from research done in the place and in the adjacent region. Sources include publications on the history of the municipality, its institutions, and so on. Survey data mapping the geographical scale of the business relations of the given firms/industry as they are stretched out in space can provide some of these data, but in-depth studies activating different qualitative techniques are needed to grasp the social field constellations, the cultural content of these fields, and the dynamics between practices and processes in different fields. These data can, for example, be derived through participating observation, fieldwork conversations, semi-structured interviews with respondents from the different firms and their business partners, and from key representatives of public institutions and private interest groups. Hence, the third step in the methodology is time-consuming case studies selected on the basis of their explanatory power focusing on the social fields of firm managers and their relational

practices. Thus, we support Peck's (2003) call for increased utilization of multi-method approaches, including the combination of quantitative and qualitative data.

Our new methodology has been developed and refined through several case studies in rural Norway (see for instance Fløysand and Jakobsen, 2002, 2007; Fløysand and Lindkvist, 2002; Fløysand and Sjøholt, 2007). From these, we have learned that most innovative practices in rural areas are influenced by *community fields* characterized by a strong community commitment, triggering managers/firms to maximize social capital in addition to profit; excellent networking, interweaving individuals, firms and places of fields of different scale; innovations, as self-organizing strategies emerge through day-to-day practice and face-to-face contact; and field dynamics stimulating hybrid forms of capitalism balancing internal and external resources (people, knowledge and economic capital). We have also found that in some rural areas, the ability of industry to take advantage of globalization and innovate has been remarkably strong, while other areas are lacking the capacity to adjust and innovate. The studies indicate that it is important for rural areas that their inhabitants and firms participate in social fields of different geographical scales and cultural knowledge production if viable rural communities are to be developed. The most innovative environments have expanded their relations in the direction of a multi-scale field system. External influences have come from widening the *fields of trade* and crossing into international markets. The integration in these fields has made the industries multi-scaled in their embeddedness. This has had a positive influence on the restructuring of industry activities. However, the glue in the field systems has, in most cases, been the community field. Very often, this field serves as an arena where knowledge and experiences from external and local fields are merged. The result is a co-existence of a 'local buzz' or ethics, facilitating localized knowledge spillover (Bathelt *et al.*, 2004).

Our point of departure is that findings from such case studies can contribute towards theory building, and should not be relegated to a supporting role that only can “enrich” the understanding derived from quantitative evidence (Hudson, 2003). For example, we outline a model combining our theoretical discussion and findings from the studies cited above. In the model in Table 2, we distinguish between internal characteristics of the firm (“low appearance of intangible resources” and “high appearance of intangible resources”) and different forms of embeddedness (“strongly embedded in social fields that are purely local” and “simultaneously embedded in social fields of different geographical scale”). Table 2 shows the expected outcomes from innovation practice in rural areas when these two dimensions are combined; a) lack of innovation capability, b) emerging innovation capability, c) satisfactory innovation capability and d) best innovation practice.

Table 2: Social field situation, intangible resources and innovation capacity of firms in rural areas.

	Embeddedness	
Intangible resources of firms	<i>Firms are strongly embedded in social fields that are purely local</i>	<i>Firms are simultaneously embedded in social fields of different geographical scale</i>
<i>Low appearance</i>	a) Lack of innovation capabilities	b) Emerging innovation capabilities
<i>High appearance</i>	c) Satisfactory innovation capabilities	d) Best innovation practice

6 Conclusions

The focus of this paper has been to develop a methodology that can be used to collect better evidence and develop more comprehensive theoretical understandings of innovation practice in rural areas. The two first sections offered a critical review of theories on embeddedness of industries and innovation practice in rural areas. The review revealed not only a consensus around the importance of analysing economic processes within their contextual framework, but also a tendency to associate informal knowledge with local embeddedness that facilitates growth. Informal knowledge, in most cases non-codified knowledge, is vague and often “sticky”, i.e. highly contextual. It is best transmitted by face-to-face contact that is frequent and repeated. From the empirical findings in the reviewed studies, it becomes obvious that the anchoring of innovation practice in rural areas is not restricted to the local level and not always positive for economic performance. The embeddedness of firms occurs in multiple forms and at various geographical levels. This means that newer contributions need to re-introduce the importance of “global–local” linkages, and allow for embeddedness to lead to path dependency and lock-in.

Expanding the concept of innovation toward a broader conceptualization implies a methodology that is sensitive to multiple embeddedness. Accordingly, the suggested methodology rests on two components, *a practice turn* and *a social field concept*. The departure for our methodology will always be on specific practices. In this case the focus has been on practice in the form of innovation activities based on subjective knowledge held within rural areas on what is appropriate in the “doing” of economic and business activities. A social field represents a particularly dense pattern of social relations that constrain and enable the agency of actors. Social fields are spatially and temporally defined. The embeddedness of actors in systems of social fields of different scale and scope grasps the complex and contingent ways in which firms, industries, and economies function and interconnect in the

global economy. The methodology enables the analysis of the relationship between globalization and rural capitalism by focusing on spatial and cultural aspects of economic practice/innovation. The argument is that, despite increasing globalization, contextual conditions influence innovations in rural capitalism. Rural capitalism has been and remains embedded in field systems of “global–local” scale and dynamics.

Taking on a social field analytical methodology means that the spatial scale, culture and dynamics of rural capitalism adaptations have to be explored through intensive research. A study applying such methodology needs to explore the social field systems in which the economic actors participate; the appearance of intangible resources in these social field systems; and how interactions in the field systems influence the capabilities of innovation in the area. However, we wish to avoid a holistic methodology that runs the risk of sliding towards empiricism. We believe that intensive research has the potential to generate new theoretical knowledge. This is demonstrated in the conclusion of the paper, where findings from social field analytical based studies are used to model the relationships between different forms of embeddedness, access to intangible resources and the innovation capacity of firms in rural areas.

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