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Keywords
learning, regions, collective, organizations, local, innovative, development

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Collective Learning in the Development of Innovative Local Organizations and Regions

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Abstract: The paper discusses the specific problems of constructing local advantage in the regional innovation setting in Australia. Focusing on 'non-traditional' intermediary organizations and their role in promoting learning it reviews a novel approach to accelerating the performance of a local council in New South Wales, Australia and its associated regional development organization.

Keywords: learning organizations; social capital; regional innovation systems; service chains; local government

1. Introduction - Problem

Conceptual models of regional innovation systems have prompted major government initiatives in Europe and North America to assess and to promote local innovation and learning capabilities. In contrast, regional innovation initiatives in Australia lack the support from central government and transnational programs that is available to regions in Europe.

Two crucial challenges face local governments: (1) the provision of quality community services, and (2) fostering sustainable regional socioeconomic development through innovation. One is an immediate tactical concern, the other a diffuse strategic issue. They are two sides of the same coin: innovation in and by the city (Marceau, 2008). Yet we know little about the process of collective learning in the development of local services and innovative regions. Lacking is (1) a conceptual understanding of local innovation and knowledge networks; (2) data on local innovation actors and activities; and (3) clarity on the most effective ways for municipal and regional government to 'construct advantage' in a federal system.

2. Research question:

The broad question that concerns us is how local governments and communities can effectively intervene to promote knowledge and innovation based economic and social development. How can they assess the capabilities in their own regions? What organizations and groups in the local community are important to the process and need to be involved? What initiatives should councils take? The study will test whether similar theories of social capital development and learning can be applied to immediate and diffuse service chains, and to learning within and between organizations. Our hypotheses are (1) that 'non-traditional' hybrid organizations at the community level (what we have called 'community innovation organizations') are more important in the diffuse situation, but that (2) once appropriate organisations are recruited or created, similar opportunities for situated learning can apply in each case.

3. Background - Current understanding

Paradoxically, the significance of 'place' is enhanced in a global knowledge economy, through a process of 'glocalisation'. This has weakened the power of national level governments and organisations but opened up new opportunities for cities and regions to display their talents on the world stage (Ohmae, 1995). Two elements of glocalisation are identified. First, economic activities are becoming both more localised and transnational. Even the smallest firms can enter international supply chains and markets. Second, institutional arrangements and regulation at the national level are becoming devolved upwards to supranational bodies (e.g. EU, WTO) and downwards to regional, metropolitan or local government and agencies (Swyngedouw, 2004). In many countries this has driven political devolution to new regional tiers of government.

This 'new regionalism' (Keating et al., 2003) provides opportunity for a broad range of local organisations to influence the economic and social development of a region – i.e. to 'construct advantage'. This opportunity is open to a range of local 'actors', from firms and business groups, educational institutions – especially universities and research agencies - various levels of government, and a panoply of non-government and intermediary organisations within society. Regional development is not determined solely by global economic institutions, by national government, nor by local players, but by the interplay of each of these actors.

If local institutions are the fabric of innovative regions, then the 'glue' is social capital. Social capital is a loosely defined concept: it may refer to institutions or cultural norms or both.1 At its simplest it equates to 'networks' and 'trust'. 'Constructed advantage' is a process of expanding social capital – skills, organisations, networks and collaborative relationships (de La Mothe & Mallory, 2006). The role of government then becomes 'backing local leaders' (de La Mothe & Mallory, 2006). Thus 'constructed advantage' achieves value through 'profoundly collaborative, socially interactive processes' that lead to communication and learning (Cooke & Morgan, 1998, p. 8).

Innovation in the city and innovation for the city present a common challenge. Both require harnessing social capital within and between organizations to create collaborative and productive 'learning organizations' (Senge, 2006), 'learning communities' (Benner, 2003; Courvisanos, 2003), local 'learning economies' (Lundvall, 1994) and ultimately 'learning regions' (Florida, 1995, 2000; Boekema, 2000; Rutten & Boekema, 2007; Morgan, 1997), which have also been conceptualised as 'externalised learning institutions' (Cooke, 1998).

As Keating et al. (2003) conclude, 'we still know too little about just how and why particular regions develop the social preconditions for successful development' (p. 19).

[1] Cooke's (2002) definition is as good as any: 'trustful, reciprocal networking through professional, civic and cultural associations' as 'a means of securing full civic engagement and sharing of common problems and issues'.

Regional innovation literature has largely ignored the conceptualisation and\ measurement of the learning process (Cooke, 2002; Rutten & Boekema, 2007), or rather, learning has become a 'black box', included but not understood. Our approach is to explore the concept of the 'learning region' as an extension of the concept of a 'learning organisation', which Senge (2006) describes as 'continually expanding its capacity to define its own future'.

3.1 Policy responses

Internationally, we see a bold policy response to the new regionalism from business and government, which had produced new organizations and initiatives:

- In the USA, 'Silicon Valley' in northern California has been viewed as a leading model of 'cooptition' (innovation involving cooperation and competition between firms and other organisations) (Saxenian, 1994; Saxenian and Dabby, 2004) and the 'breakthrough' region in terms of regional innovation (Cooke, 2002). Joint Venture Silicon Valley (JVSV) was established in 1993 by regional business, education, government leaders who used their own resources (Wegener, 2001; Cooke, 2002) in an effort to improve Silicon Valley's networking, interaction and regional viability.
- The European Commission set up the Innovating Regions in Europe (IRE) Network in the mid 1990s to exchange experience and best practice in the European regions. IRE aims to increase capacity to support innovation and competitiveness among firms in the regions by identifying appropriate strategies and schemes (Innovating Regions in Europe, 2007a, b). The core activity of IRE are the Regional Innovation Strategy (RIS) Projects that offer a generic methodology involving regional dialogue; involvement of all relevant organisations; analysis of regional innovation needs and capacities; selection of priorities for innovation support; and action plans and pilot projects.

4. Regional innovation in Australia

In contrast, the growth of coordinated regional innovation initiatives in Australia has been late and ineffective, for two main reasons: the structure of industry and the structure of government:

- We see glocalisation in some industries through ‘natural’ clusters – e.g. in the wine production and tourism industries, where there are excellent regional linkages between firms, training institutions and research agencies. But as noted, there are few horizontal clusters of the ‘Third Italy’ kind (Marceau, 1999) due to lack of critical mass or scale, geographical dispersion, path dependence and concentration of firms in key export industries. In the Illawarra the heritage of heavy industry and infrastructure shapes current structures for collaboration. A survey of small firms here found that innovation predominantly involved vertical collaboration with suppliers and customers along the value chain. There seemed to be barriers to horizontal collaboration with universities and other knowledge institutions (Turpin & Garrett-Jones, 2002).
- A significant factor is the character of government in Australia: the role of different levels of institution and governance – the federal (central), state (provincial) and local – and the extent to which they are prepared to intervene as facilitators. Unlike Spanish and the UK central governments, which have been ‘inventing’ ways to devolve power to the regions, Australia is shackled by a 19th century federal constitution (1901) which is virtually impossible to amend. The constitution severely limits the power of state governments to raise revenue and thus to invest in R&D and innovation. Further, the states have ceded significant responsibilities to the federal government even where they hold the legislative power (e.g. funding of universities). Far from becoming devolved, power is becoming centralised to a federal government that over the years has had an ambiguous approach to regional development. Likewise, the state government are loath to favour particular regions in their policies. The third tier of government is weak and diffuse. Each large city has multiple councils, while some rural councils cover huge regions. Local government is working within a system of governance which has been described as ‘fragmented and incoherent’ (Parker & Tamaschke, 2005, p. 1803) in relation to its influence over business and in relation to effective coordination of different levels of government.

While not unique to Australia - regional governance in most countries lacks the ‘panoply of coercive powers’ of nation-states with power relying far more on ‘steering and concertation’ (Keating et al., 2003, p. 38) - in contrast with regional devolution elsewhere, local governments and other local organizations in Australia concerned with economic and social development are faltering. We see a lack of power at the local level, and a lack of coordination between players, and as a consequence a political paralysis in seizing the opportunities of the new regionalism.

4.1 The Illawarra region

Located in the Illawarra Region approximately 80 kilometres south of Sydney, Wollongong is the third largest local government area in NSW by population (est. 192,000 in 2006) (Australian Bureau of Statistics, 2007); with the neighbouring Shellharbour and Kiama municipalities bringing the total regional population to around 275,000. For most of the 20th century the city had a dominant industrial base with a large steelworks at Port Kembla. Industrial decline and a negative image of the city prompted the Wollongong City Council to fund a A$2.5 million ‘city image campaign’, declaring itself a ‘City of Innovation’ in 1999. The city has set its sights on attracting knowledge-based services as well as building on its traditional strength of steel manufacturing and engineering and as a regional service economy; to sell itself as ‘a regional city with the advantages of a capital’ (Wollongong City Council, 2008). It builds on the initiatives of other regional players, like the University of Wollongong’s Innovation Campus (Buchan Consultants, 2006). The Council itself is committed to continually improving the quality of its services, being innovative and creative and working with the community (Wollongong City Council, 2009). To improve collaboration at the policy level the city has established ‘Advantage Wollongong’, a forum with members drawn from a range of business, industry, government and educational groups in the region.

5. Approach

In the current paper I concentrate on the problem of identifying actor organisations and knowledge gaps. We have proposed a ‘meso’ approach (neither case studies nor regional capability survey) for assessing constructed advantage in local innovation systems, based upon a broad review of the literature on learning regions and our observations about the variety of ‘community innovation organisations’ (Garrett-Jones et al., 2007). The framework comprises a series of ‘actors’ and of ‘assets’ (Figure 1) and builds on the RIS literature (e.g. Cooke, 2002; Cooke & Morgan, 1998; de La Mothe & Mallory, 2006; Gertler & Wolfe, 2004, Langford et. al, 2002; Morgan, 1997; Wegener, 2001).

5.1 Actors

The ‘standard’ players in innovation systems are well known: firms, universities and research agencies, government programs, capital markets etc. (e.g. as shown by the IRE model). In our view, this does not capture the complexity and variability of local innovation players, particularly in relation to ‘intermediary’ organizations and the many roles of different layers of government. Some of the players in these networks and intermediaries are obvious – major industries, chambers of commerce, business groups, universities and government agencies at all levels. Others are less noticeable – charities, sporting clubs, business services, schools and colleges and individuals – but nevertheless may be significant in particular contexts. Our categories of local ‘actors’ complement and augment the ‘standard’ NIS framework:

- We define a class of ‘community innovation organisations’ (Garrett-Jones et al., 2007) using the following criteria: (1) focus on a defined geographical region; (2) broad membership, not only of businesses and/or policymakers, but a community of regional decision makers; businesses and business organisations; university and education leaders; healthcare leaders; ‘civic officials’; non-profit organisations; government research institutions, local industries, university instructors, higher education leaders, and youth groups (de La Mothe & Mallory, 2006). At their core they represent a partnership between a city/region, university and chamber of commerce; (3) not generally initiated or formed by (federal/State) government; (4) they rely on their members’ funds are not dominated by government funding; and (5) they take on a very wide range of functions from advocacy to planning and funding local initiatives and activities.
- The other element that is missing from the ‘standard’ NIS model is the complex interplay between different levels of government. This is a serious issue in Australia’s federal system (as the government memberships of ‘Advantage Wollongong’ demonstrate).

Figure 1: Institutional actors and assets in local innovation

Regional advocacy groups (voluntary collaboratives)	Regional leadership institutions, community agencies	Regional governance	Regional business consortia	National intervention and intermediaries

ACTORS

1. Infrastructure	2. Leadership	3. Capital	4. People	5. Learning
a) Physical (‘hard’) and institutional (‘soft) b) ‘Smart’ – connectivity and networks. Linkages (regional/national) (‘soft’)	a) Across sectors b) Engagement, debate, branding c) Vision, community vision, ‘regional foresight’	a) Local b) Inbound	a) Networks, learning, access to expertise b) Quality of life	a) Exemplars, best practices b) Sectoral networks; identificati on of potential sectoral bases on which to build (Cooke, 2002)

ASSETS

Source: Garrett-Jones et al. 2007, after Cooke, 2002; de La Mothe & Mallory, 2006; Gertler & Wolfe, 2004, Langford et al., 2002; Wegener, 2001.

5.2 Assets

The assets are simply a list of the factors which appear important in a wide range of situations in constructing local advantage (Garrett-Jones et al., 2007). These local assets can be characterised under five broad headings: infrastructure (physical and 'smart' such as networks), leadership, capital, people and learning systems. The assets framework can be used to carry out a 'gap analysis' in particular regions, recognising of course that not all assets will carry the same importance in each region.

A further extension to the framework is to add context specific 'activities' which we may term service chains. These may include services such as provision of risk capital, vocational training, or less tangible activities such as provision of regional strategy or leadership. This reflects the idea that 'soft services are considered the key to the modern performing, learning region' (Keating et al., 2003, p. 18). Key elements included in 'soft services' are investment in human capital (education, training, skills upgrading), R&D, inward investment, and endogenous development and entrepreneurship (Keating et al., 2003). These factors are already included in our list of 'assets'.

Actors work within the institutions (forms of accepted organisation or way of behaviour) available to them, which are partly a function of history. Thus, assets are not necessarily associated with the same actors in different regions. Actors are substitutable; we can accept understudies! So what is important is not whether a bank provides venture capital, for example, but whether risk capital is available from any source in the system (e.g. regional government or large firms). Likewise, regional leadership may come from a dominant firm or industry sector in the region, from knowledge organisations like universities and government labs, or from the political or governmental sector. Equivalent leadership roles may be adopted by quite different organisations in different regions, depending on the economic, cultural and institutional history of the region. What we are saying then is that the core set of assets required is likely to be common across regions, but that the actors may and will be quite different, and therefore it is important to identify which actors are carrying out, or could potentially perform particular activities or services.

6. Discussion – Contribution and practical implications

The concept of innovative regions in this view is an extension of 'national innovation systems' (NIS) model with commercial enterprises securely in the driving seat. Many other actors – universities, financiers, and the legal system – essentially 'support' the enterprise in its competitive quest. This cradle or incubator model is fine as long as the enterprise thrives, but is less well equipped to deal with crisis or decline where the 'next' industries are yet to be identified or emerge. Here what is required is more of a 'fertile field' model, where enterprise can emerge unanticipated from a range of sources. In some places, 'the public authority side may be 'miles ahead while in other innovation is pushed by companies powering ahead' (Marceau, 2008, p. 138; Todtling & Kaufmann, 1999; Todtling & Trippl, 2005). Todtling and Kaufmann (1999) classify regions as 'firm-based innovation systems' where inter-firm relations were the most important; Regions where universities and research organisations were more important were termed 'science based innovation systems'. A third category of 'policy-based systems' was assigned to regions where there was a stronger role taken by technology centres, regional agencies and other policy actors. A more comprehensive model of learning regions is presented by Ruttan and Boekema (2007), which comprises ‘regional context’, ‘processes’ and ‘outcomes’ but again it is ‘one dimensional’ in that it does not specifically map actors and activities.

We have developed framework of regional innovation ‘assets’ and ‘actors’ as a tool for identifying critical strengths and gaps in ‘activities’ and ‘service chains’. These gaps can then be taken as opportunities for action and learning within and between organizations. The study attempts to unite the organizational learning and innovation policy approaches to understanding the complexity of regional renewal initiatives. It extends the theoretical framework for analysing learning regions. By comparing the common assets and not being diverted by the exact structure of the actors we offer a model which we hope is flexible but provides a framework for comparing different regions strengths in constructing advantage. This is not entirely new, but we believe extends existing models. To the extent that our model can be used as a diagnostic tool to identify opportunities for collaborative learning it can provide guidance and exemplars for local government and community organizations in Australia and beyond that wish to accelerate innovative local services and socioeconomic development, but lack the resources of their counterparts elsewhere.

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