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## Rural Innovation Ecosystems and Leading Wellbeing

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Innovation ecosystems are an emerging concept to describe place-based clusters of companies and other organisations, interacting for growth, development and sustainability, often focused around an 'anchor institution'. Most successful examples operate in urban contexts. Literature on rural innovation suggests that the nature and needs of rural businesses can be different. This article reviews some of the key themes, including skill needs, aspirations and motivations of rural professionals, suitability of anchor institutions and leadership. Rural areas are known to have different demographic structures from urban ones. In particular, the tendency to attract highly qualified, but growth-reluctant, professionals, as 'in-migrants' is discussed. We hypothesise that a successful rural innovation eco-system should focus more on sustainability, wellbeing and balance, rather than primarily on ambition and growth. The needs of individuals may also be more important than those of business units and a focus on skills development could be desirable.

- Rural
- Innovation
- Eco-systems
- Anchor institutions
- Leadership
- Sustainability

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THE CONCEPT OF PLACE-BASED “INNOVATION ECOSYSTEMS” is increasingly being debated by policymakers and other actors (UK Government, 2017; Rissola, 2017; Durst and Poutanen, 2013; Freshwater, 2012) with the aim to use research to underpin emerging industrial policy. There is no common definition of innovation ecosystems (see, for example: Adner, 2006; Mercan and Göktaş, 2011), but essentially the term is used to describe a group of various organizations (businesses, research organizations, business support intermediaries), their linkages and modes of collaborating or networking together, usually within an urban city-region. Relatively little attention has been given to understanding specific implications of this thinking to rural areas, where the economies, skill base and organizational structures have very different characteristics.

There are a number of well-described innovation ecosystems, often clustered around major urban universities (e.g. Cambridge in the UK, Silicon Valley in the USA, Waterloo, Ontario in Canada), which provide leadership and act as “anchor institutions” or “large locally-embedded institutions, typically non-governmental public sector, cultural or other civic organizations, that are of significant importance to the economy and wider community life of the cities in which they are based” (Goddard *et al.*, 2014, p. 307). In addition to generating broader benefits that “can support or ‘anchor’ wider economic activity within the locality” (*ibid.*),

[such] non-market, place-based institutions are also key “anchors” of place, for by their practices, they “root” or otherwise “moor” the people of the urban in place. Good examples of such place-based anchor institutions are universities, hospitals, community foundations, local governments, and key infrastructure services (Birch *et al.*, 2013, p. 8).

These anchor institutions tend to focus particularly on fast growing, technology-led businesses that are locally based with global reach (Bramwell *et al.*, 2008). In some cases, innovation ecosystems are sectorally, as well as geographically, focused and some consider “smart specialization” to be advantageous to developing innovation ecosystems. In particular, the European Union actively promotes sectoral specialization as part of its regional economic development policy (Da Rosa Pires *et al.*, 2014). In the Canadian province of Ontario, a network of Regional Innovation Centres (RICs) offer start-ups and entrepreneurs specialized assistance in 18 regions across the province, including access to loans and investment, market information and peer networking programmes (Knight, 2016).

The innovation ecosystem can represent a vehicle through which business support, skills improvement or other government interventions can be implemented (hence its conceptual value to policymakers). There is an expectation that innovation ecosystems grow and develop organically, driven by the strategic priorities of the member organizations. The hope is that initial government investment in supporting businesses will yield sufficient commercial benefits to the local partners to ensure its sustainability. The “eco” in the name is not accidental, but borrows ecological concepts to describe a process of creating the

correct environment, nurturing and support actions for more sustainable forms of development. In some contexts, coordination between anchor institutions and grassroots interests has only led to incremental improvements at the local level, such as in Buffalo, New York, with limited resident empowerment and a “planning process [that] continues to be dominated by institutional interests with limited community input” (Silverman *et al.*, 2014, pp. 158-159). Other concerns are raised in the English higher education context, in particular the recent experience of “vulnerable institutions in the most vulnerable places with the greatest dependence on higher education” (Goddard *et al.*, 2014). However, other authors (Hodges and Dubb, 2012; Marshall *et al.*, 2013) observe that successful innovation ecosystems generally benefit from the leadership or convening power of an anchor institution, typically a university that is able to attract strategic corporate partners. Mahroum *et al.* (2007) note that the limited access to a strong knowledge base is one of the challenges facing rural economies. There are few, if any, rural-based universities with an international research profile, which can in itself present a challenge.

There are other examples in which the lack of an “anchor institution” is addressed through government or external intervention. At the international level, the United Nations Public-Private Alliance for Rural Development (UNPPA) promotes collaboration on sustainable rural development between UN entities, businesses, NGOs and other relevant stakeholders committed to sustainable rural development for the benefit of both the rural poor and business investors (UN Office of the Special Adviser on Africa, 2004). In Madagascar, UNPPA facilitated the establishment of the pilot ICT Village in Sambaina with the support of the Government of Madagascar and various partners from the UN system, business, academia and civil society (OCCM, 2006). A related national initiative, the Madagascar Action Plan 2007–2012, included commitments to connected infrastructure, educational transformation, rural development and a green revolution, among others.

Underlying the discussion of innovation ecosystems is an assumption that innovation is critical to growth and in turn that growth will lead to wellbeing. Both of these assumptions require some unpicking and considering specifically from a rural context. In this Turning Point, we will start to explore the relevance of the innovation ecosystems concept to rural wellbeing and then consider how they might be led successfully.

Rural contexts are characterized primarily by dispersed populations and tend to be formally defined in these terms (United Nations, 2017). The most obvious implications are therefore that business and communities are physically isolated and remote, with longer travel times needed to access (public) services and for business activities with customers or collaborators. However, rural areas tend also to have demographic differences from urban areas. There tend to be fewer opportunities for young people, particularly those with higher level skills and qualifications, so that they leave and move to urban areas. Some rural areas also attract older people in retirement or as commuters to urban areas (a process described as “counter-migration”, Shucksmith, 2013 or “counter-urbanization”, Mahroum *et al.*, 2007). As a result, both communities and the workforce are

older than in urban areas (Bayliss and Sly, 2010; Atterton and Thompson, 2015; Davies, 2011). Both public and private sector organizations tend to be smaller and more likely to be a subsidiary or satellite than a head office or specialist hub. Recruitment and retention of skilled professionals is a major issue for rural areas, as it becomes harder to provide a package that supports career development, skills updating and networking.

Rural areas do, however, attract a particular type of skilled professional and a particular type of business. Many mid-career professionals relocate to rural areas, sometimes to accompany a spouse taking up a senior role in one of the few larger organizations, or because they proactively choose the rural lifestyle. The assumption here is that “wellbeing”, associated with a better work-life balance, is available within a more relaxed rural landscape. Some of these individuals are also motivated by a desire to be self-employed and many are highly innovative (Mahroum *et al.*, 2007).

There is limited literature on the nature of rural businesses, but some evidence that more creative service and business models are practised, with practical initiatives being introduced to meet the needs of particular social groups in rural business contexts (e.g. Women in Rural Enterprise). A related example of this is the community broadband social enterprise, Broadband for the Rural North Ltd. (B4RN), established in the English county of Lancashire in 2011 to address the limited connectivity offered by mainstream providers. B4RN supports teams of volunteers to physically install fibre broadband to their communities, providing specialist technical and procurement advice in Lancashire and the adjacent county of Cumbria.

As in urban areas, formal and informal volunteering is prevalent for the provision of social care and some health care. However, it is plausible that there is a greater rural reliance on volunteers, for example, in providing community transport services for hospital appointments due to lack of public transport. Professionals and organizations often have less defined roles, or multiple roles. It is not unusual for professional people to hold more than one part-time post, one of which may be a self-employed or small business owner role. Public services collaborate differently and perhaps more. For example, in North West England the Cumbria Constabulary is piloting a response service in partnership with health and social care services, to support vulnerable people, who might in some unfortunate cases be taken into police custody for their own protection, if there is no access to more appropriate help for them.

Rural businesses may be less likely than urban businesses to be fast growing, due to the limits on access to human capital, as well as other factors (such as distance from markets, shortage of finance, difficulties in sourcing raw materials and suppliers). They may also be less innovative than urban businesses, but some authors argue that this view stems from a narrow, technology-led definition of innovation. European Union support for regional development has historically been linked to sectors and “smart specialization”, supporting technological development primarily. In a more recent report to the EU Joint Research Council, evidence is noted of rural economic dependence occurring as a result of “social and cultural innovation”. Innovation tends to be more

about new ways of using technology, often in creative combination with natural resources, historical legacy or social context (Da Rosa Pires *et al.*, 2014). Formal, science-based innovation, generally needs large investment and a concentration of skilled personnel. However, there are many examples of individual entrepreneur-driven rural innovations. These tend to have a limited benefit, reflecting the entrepreneur's sphere of influence. However, some of the constraints of rural working actually drive innovation, particularly in process and productivity (Freshwater, 2012).

We suggest that another limiting factor is business owners' motivation and desire for growth. The UK Government Department of Business, Innovation & Skills commissioned a study entitled "Sociology of Enterprise", to explore mindsets and behaviours of business owners (Theodorakopoulos *et al.*, 2015). While this study does not differentiate between urban and rural businesses, findings indicate that growth-resistant and growth-ambivalent business owners tend to have particular demographic characteristics. Growth-ambivalent owners, who may respond to external support and interventions, are those who do not actively seek to grow their businesses, but may pursue growth if opportunities occur. These individuals tend to be older (typically over 50 in the sample surveyed) and are also more likely to be female. Reasons for choosing not to grow their business include satisfaction with current income levels and a desire to keep the business small enough that they can stay in control. These factors may well be more prevalent among rural business owners. We must note that this study looks at business growth and not innovation. However, the authors observe that the most growth-inclined business owners are also the most receptive of technological innovation.

A collection of articles on rural innovation, commissioned by NESTA, UK (Mahroum *et al.*, 2007), describe trends within rural economies. Three types of innovation are described: those related to "quality of life", such as healthier food or ecological products and services; those related to diversification away from traditional agriculture and fisheries industries, often tourism related; and those driven by the entrepreneurial "in-migrants" as a consequence of "counter-urbanization". Other considerable research on the rural economic contributions of in-migrants, particularly in relation to the creation of new businesses and jobs, is reported more recently (Atterton and Thompson, 2015).

The lure of remote locations, specifically Scottish islands, for entrepreneurs is highlighted also in a study of island entrepreneurship and enterprise by Burnett and Danson (Burnett and Danson, 2017). Such in-migrants are generally found to be less motivated by growth ambitions, although they often have entrepreneurial skills. They are also more likely to work in cultural industries, such as language, the arts, food and heritage. This review article confirms that similar developments are seen elsewhere in the world, in developing as well as developed islands.

In their discussion of technology transfer between universities and rural businesses in developing countries, Theodorakopoulos *et al.* (2012) describe the importance of nurturing a network, through a community of practice viewed within a learning theory framework. Their case study focuses on a group process

to work through barriers to technology transfer. In a more competitive urban environment, companies would need to overcome the barriers on their own, or at least to proactively seek and find the necessary support. Other studies (Da Rosa Pires *et al.*, 2014; Mahroum *et al.*, 2007) suggest that social and cultural drivers need to be more fully understood and exploited in rural innovation policy. Sectoral clustering can still be relevant, particularly around “rural” sectors such as tourism, food and agriculture, but these may need a broader interpretation. Rural innovation policy can potentially capitalize on the association with better quality of life and the counter-migration trend.

Rural areas are populated primarily by individuals, often working in more than one part-time role, possibly a mix of self-employment, employment, unpaid work, educational, caring and other activities). Whereas in urban areas, policy and business support is targeted at businesses, it becomes less appropriate to do so in a rural area. Not only is it likely that such businesses are smaller and less stable, business owners and employees often “wear more than one hat” and may represent more than one organization. Hence it follows that to develop the organizations and businesses in a rural area, there needs to be a focus on skills development, supporting leaders and empowering people to see beyond organizational boundaries in how they work.

The implication from those that have specifically studied rurality is that rural areas are not only structurally and economically different from urban ones, but there are also cultural, social and aspirational differences. The vision of an innovation ecosystem offering a thriving, buzzing environment, where small companies can rub shoulders with corporate innovators and leading edge research from universities is highly desirable to an ambitious growth economy. Rural areas do not have sufficient numbers and types of organizations to provide the buzz, yet they have the potential to be more focused on sustainability, balance and wellbeing, than growth and ambition. This can be seen as both a problem and an opportunity. Understanding how rural innovation ecosystems need to be structured and “anchored” differently, and how they might provide effective leadership for wellbeing, may be of wider relevance.

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