



Exploring the role of proximity in SME knowledge-acquisition

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Abstract

Knowledge-acquisition activities of small- and medium-sized enterprises (SMEs) are assumed to benefit from geographic proximity to similar firms and centres of research excellence. This paper will explore the knowledge-acquisition processes and critical interfaces of innovative SMEs and outline factors that contributed to an observed lack of geographic proximity-based knowledge search activity. A growth path based upon innovation driven, rapid internationalisation and subsequent customisation strategies fostered organisational proximity-based knowledge-acquisition from international sources. It is argued that local contextual factors will determine if organisational or geographic proximity (or both) are the key to knowledge-acquisition. The recognition of a diversity of potential growth trajectories is recommended for SME policies.

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1. Introduction

Small- and medium-sized enterprises (SMEs) traditionally have been thought to benefit from collaborative knowledge-based activities in geographic regions based on the presumption that it is easier to mobilise the complementary resources and capabilities embedded in localised networks. Cluster research, for example, was developed following the observation of extraordinary productivity in certain industries in specific regions, such as in Northern Italy and Silicon Valley, where knowledge sharing between organisations in close geographic proximity appeared to have been a key source

of advantage. Exploiting the inter-organisational benefits of geographic proximity now underpins a huge variety of policy initiatives as governments attempt to develop the regional advantages for national economic growth.

There is little doubt that geographic clustering has been a major contributing factor historically in the growth of many regions. In addition, there is evidence that firstly, the clustering of innovative activities correlates with productivity (Paci and Usai, 2000) and, secondly, that firms in clusters do innovate more (Baptista and Swann, 1998). However, like McKelvey et al. (2003) this paper addresses the validity of co-location arguments related to knowledge generation and innovation. In particular, the question is asked as to whether it necessarily follows that close geographic proximity to

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complementary knowledge and capabilities plays a part in SME innovation in all situations. If geographic proximity is not always fundamental to SME innovation, what factors might indicate the suitability of, or drive the development of, alternative knowledge-acquisition strategies?

The objective of the paper is to explore the way in which a sample of innovative manufacturing and service SMEs based in New Zealand accessed the knowledge that was key (as described by the SME managers) to continued innovation. All the firms studied grew on the back of a significant innovation and most are now 'international' in character in that they export virtually all of their production. Although most of the firms worked with local New Zealand suppliers, very few of these were described as key knowledge sources.

In order to understand better the role of proximity, the knowledge-acquisition processes will be described according to the critical interfaces employed to access and develop crucial knowledge bases. Whether these interfaces were reliant on geographic or organisational proximity provides the basis for a discussion of the impact of proximity and potential factors that might explain the observed lack of geographic proximity-based knowledge-acquisition activity.

Whilst the size of the sample used in this research can only result in the development of exploratory insights into this apparently non-localised knowledge-acquisition behaviour, particularly with respect to small-firms in small countries, the paper will attempt to develop some propositions regarding SME growth and innovation, which take into account factors that might trigger a growth trajectory that does not exploit geographic proximity to knowledge sources.

2. Knowledge-acquisition and proximity

Knowledge-acquisition is one part of knowledge management which, in turn, has been defined as "the process of critically managing knowledge to meet existing needs, to identify and exploit existing and acquired knowledge assets and to develop new opportunities" (Quinstas et al., 1997). There has been relatively little research reported on knowledge management and acquisition in SMEs (McAdam and Reid, 2001; Liao et al., 2003). Even from start-up, firms develop mechanisms for external learning (Almeida et al., 2003) but

different national, institutional and firm factors (Mason et al., 2004; Hemmert, 2004) have significant influence on favoured knowledge-acquisition modes.

External knowledge-acquisition can occur in a variety of ways (Almeida et al., 2003), including the hiring of technical staff and through informal or formal collaboration and alliances. Geographic proximity to the knowledge sources with which the organisation is collaborating is generally assumed to assist knowledge-acquisition. Much of the advantage of such collaboration is thought to come from efficiencies in collective learning (Belussi, 1999), particularly for innovative firms. Whether understood as generating economic externalities or spillovers of R&D (Krugman, 1991; Audretsch and Feldman, 1994; Feldman, 1994) or facilitating inter-organisational transmission of tacit knowledge via social capital (for example, Powell et al., 1996), geographic proximity is thought to be important for innovative activity. "Since knowledge is generated and transmitted more efficiently via local proximity, economic activity based on new knowledge has a high propensity to cluster within a geographic region" (Audretsch, 1998).

Any exploration of geographic proximity leads directly to studies of successful knowledge sharing clusters. In 1998, Michael Porter stated, "today's economic map of the world is dominated by what are called clusters" (Porter, 1998). Localisation, regional innovation systems, industrial districts, learning regions, local production systems and agglomeration economies are other labels given to the phenomenon of geographically co-located firms in a value chain collaborating in some fashion in order to gain a measure of collective efficiency (Rabellotti and Schmitz, 1999). The observation of regional agglomeration economies is not new with most writers referring back to Marshall's work *Principles of Economics*, originally published in 1890 (Marshall, 1986; Keeble and Wilkinson, 1999). A rise in the number of studies of industrial districts and small-firm led economic growth in the 1980s combined with the increase in interest in 'networks' and social aspects of inter-organisational interaction (Granovetter, 1985; Burt, 1987, 1992; Gulati, 1999) is the result of renewed activity on the part of scholars in such disciplines as economics, planning, sociology, strategic management, organisational behaviour and business history (Harrison, 1991). The seeming paradox of the rise in "importance of local proximity and geographic

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