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The locus of innovation at SMEs

A literature review on networks effect in the discovery and realization of innovations

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Relevant theme: Understanding entrepreneurship and innovation - Theory Building

Our study involves an analysis of whether social and economic networks influence innovation processes, or in the words of Oerlemans, Meeus & Boekema (1998), 'Do networks matter for innovation?' This study is confined to the creation and implementation of new ideas, processes and products within and by small- and medium-sized firms. According to Dosi (1988: 1132) innovation is primarily a process built on the activation of the specific internal capabilities of firms, cumulative routines and implicit or tacit knowledge: 'one needs to have substantial in-house capacity in order to recognise, evaluate, negotiate, and finally adapt the technology potentially available from others.'. The driving forces for innovation are internal employees and inputs from R&D, manufacturing or sales units, etc.). Others have stressed the mobilisation of external resources from their environment, such as direct or indirect links with knowledge institutions, suppliers, customers etc. Oerlemans, Meeus and Boekema (1998) have argued that in order to explain innovative performance both internal and external resources need to be included.

It could be the case that entrepreneurial firms suffering from strong internal resource constraints or competency gaps, may benefit from external linkages with technology partners, investors and/or service providers, acting as real complementors. Lee, Lee and Pennings (2001) argued similarly that networking with external resource holders

providing complementary resources contributes to a further accumulation of internal capabilities. This research follows up their advice and seeks to answer the following question: which ties and network position matter to complement internal competences in order to be innovative? Or in other words what role do networks play to find external knowledge which can be combined with internal competences to realize new combinations?

The starting point in our study is that networks matter in the innovation processes of SMEs, since ‘innovation does not exist in a vacuum (Van De Ven, 1986: 601).’ The contacts a firm has could both generate advantages for further innovation and growth, and disadvantages leading to inertia and stagnation, for instance by being locked out from where the action is, having taken the wrong advice or chosen the wrong partner, or being locked into a leading firm, sector or cluster in decline. In the first case the existing social network or the new business contact provides opportunities furthering eventual success, in the second case, the existing network or the new business contacts turns out to have a constraining or even detrimental effect on performance. The search and use of social capital is driven by goal-specificity: it only includes those ties that help the actor in the attainment of particular goals. Most of the research so far has been deliberately or unwillingly one-sided, by for instance only looking at entrepreneurial firms in dynamic industries (or more specifically, start-ups in the high-tech industries). Or selective attention has been paid to either the internal sources or the external contacts to trigger innovation. And when a conclusive study has been conducted into investigating both the effect of internal and external ties on innovation, the sample often includes large and established companies and managers (instead of entrepreneurs and smaller firms, as what we are interested in).

The main line of reasoning in this paper is as follows. In the first section we discuss the key network concepts, such as, social capital, relational embeddedness (strong and weak ties), structural embeddedness (i.e. structural holes). Section two deals with innovation and the central role of knowledge in the discovery and realisation of innovations. Networks and its potential for knowledge brokering appear to be important and therefore the last section focuses on the relationship between particular network characteristics and innovation.