Chapter 11
Up the Junction?
Exploiting Knowledge-Based Development through Supply Chain and SME Cluster Interactions

Tim Donnet
Queensland University of Technology, Australia

Robyn Keast
Queensland University of Technology, Australia

David Pickernell
University of Glamorgan Business School, Wales

ABSTRACT

Maximisation of Knowledge-Based Development (KBD) benefits requires effective dissemination and utilisation mechanisms to accompany the initial knowledge creation process. This work highlights the potential for interactions between Supply Chains (SCs) and Small and Medium sized Enterprise Clusters (SMECs), (including via 'junction' firms which are members of both networks), to facilitate such effective dissemination and utilisation of knowledge. In both these network types there are firms that readily utilise their relationships and ties for ongoing business success through innovation. The following chapter highlights the potential for such beneficial interactions between SCs and SMECs in key elements of KBD, particularly knowledge management, innovation and technology transfer. Because there has been little focus on the interactions between SCs and SMECs, particularly when firms simultaneously belong to both, this chapter examines the conduits through which information and knowledge can be transferred and utilised. It shows that each network type has its own distinct advantages in the types of information searched for and transferred amongst network member firms. Comparing and contrasting these advantages shows opportunities for both networks to leverage the knowledge sharing strengths of each other, through these 'junctions' to address their own weaknesses, allowing implications to be drawn concerning new ways of utilising relationships for mutual network gains.

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INTRODUCTION

Knowledge-Based Development (KBD) has become a cornerstone of modern economic activity. Consequently policymakers have increasingly sought ways to encourage activities related to this. Specifically, more and more, knowledge and innovation is a collective rather than an individual activity (Cooke, 1998; Lundvall, 1992; Weick, 1990), for reasons of resource and information intensity and scarcity (i.e. it takes a lot of resources that many firms don't have individually). SMEs for example are often constrained by limited finance, time, and information sources (Gilmore et al., 2006, p.21). For SMEs the resources available for effective KBD are therefore limited at best (Desouza & Awazu, 2006). Due to these deficiencies in resources, SMEs will often look outside of their own boundaries for information and knowledge (Chen, Duan, Edwards, & Lehaney, 2006), exploiting formal and informal network contacts to the firm's advantage (Gilmore et al., 2006, p.21).

The arguments surrounding this condition can also be seen as related to the knowledge spillover theory of entrepreneurship (Acs, Audretsch, Braunerhjelm, & Carlsson, 2004). This theory essentially argues that knowledge developed in one institution may be commercialized by others, and that entrepreneurship is one way in which an economic entity with new knowledge can best obtain returns from that knowledge. The complexity of knowledge intensive entrepreneurship often creates further barriers for firm creation. This may result from:

1. failure of private firms and public institutions to generate new knowledge
2. failure of that knowledge to be disseminated efficiently
3. failure of individuals to exploit new knowledge
4. a range of other factors that make KBD entrepreneurship difficult (also see Audretsch, 2004).

The current focus on KBD therefore needs to supplement analysis of knowledge creation mechanisms with evaluation of the capabilities of knowledge users and effectiveness of knowledge transfer/translation (Braczyk & Heidenreich, 1998; Cooke, Uranga, & Etxebarria, 1997). Of central importance is to link knowledge and innovation in the process of creation and how it is disseminated, with commercialised outcomes in terms of new products, processes and capacities. If, therefore, knowledge generation encompasses the 'triple-helix' elements of Leyesdorff's (2000) government-industry-institutions interactions-based model, it is also important to consider the factors which help stimulate, manage and diffuse created knowledge and encourage KBD as part of an overall knowledge and innovation management framework.

Geographically concentrated cluster-based arrangements can provide a general acceptance between firms for information and knowledge spillover and sharing (Bartlett & Bukvic, 2006), allowing SMEs greater access to relevant information. More importantly, information that is irrelevant to an individual SME is likely to be relevant to another; a point that will be utilised later in exploring the utility of 'junction' firms. These junction firms are simultaneously members of both supply chain and clusters, and can thus act as conduits for two-way flows of information which are beneficial to both types of network. Frenz and Ougthon (2006) argue in particular that proximity facilitates the transfer of tacit knowledge transfer and learning — both of which are important determinants of innovation and thus KBD.

Boschma's (2005) and Frenz and Oughton's (2006) reviews of the theoretical research suggest that the borders of innovation/enterprise systems can be blurred (also see Narula, 2003), particularly as the growing importance of trade and multinational enterprises (Simmie, Sennet, Wood, & Hart, 2002) creates sectoral and technological processes that cross national and regional borders. Together these attributes contribute to building a shared/pooled knowledge base across a range of

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