Chapter 6.15
Action Research Methods

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INTRODUCTION

To date, most research into the implications of the Internet for SMEs has focused on individual business barriers to ICT and e-commerce adoption. Such research has shown that SMEs tend to be time- and resource-poor, with their size being their main disadvantage vis-à-vis ICT adoption (OECD, 2000; Van Beveren & Thompson, 2002). Perhaps the question is not whether small firms have adopted ICT, but rather where are small firms in terms of their ICT adoption. ICT encompasses a series of separate yet interrelated components; for example, electronic mail (e-mail), the Internet, the Web, and e-commerce, which can be adopted in a variety of social and business settings. Hence, it is suggested that ICT cannot be considered as a single technological innovation but rather as a series of (process) innovations, potentially resulting in variable ICT adoption patterns (Walczuch, Van Braven, & Lundgren, 2000).

Keeping up with rapidly changing ICT trends and moving ahead with the adoption of the various ICT components is a challenge for all firms but may be particularly confronting for resource- and time-poor SMEs (Earl, 2000). To counter this phenomenon, a SME aggregation or cluster argument may be made for the use of ICT to develop joint e-marketing and e-commerce economies of scale (Braun, 2002). In the context of emerging technologies and related knowledge-economy business models, linking stakeholders in dynamic clusters is believed to enhance competition and regional innovation (OECD, 2000). Indeed, the literature is saturated with views on geographic proximity, or clustering of industries and companies, to create innovation and competitive advantage (Asheim, 2001; Porter, 1990).

The geographic scope of a cluster can vary from a single city, state, or region to a network of companies across state borders or even country borders. They can be formal or informal, in the public or private sector, horizontal or vertical, or physical as well as virtual (in an online environment). In a horizontal network, companies within the same industry sector might share an industrial or technological base, operate within a common market, and use a common purchasing or distribution channel. Vertical networks include horizontal cluster participants, as well as suppliers, users, and related services. Porter discusses competitive advantage as being "created and sustained through

a highly localized process" (Porter, 1990, p. 19) and ascribes enduring competitive advantage in a global economy to local knowledge, relationships, and motivation that cannot be duplicated by global partnering (Porter, 1998).

Connectivity has boosted conventional reasons for interfirm networking and virtual clustering—for example, by creating critical mass online—as it facilitates the knowledge-based infrastructure network imperative for today's competitive advantage. While a number of recent studies have shown benefits in physical SME clustering (Enright & Roberts, 2001; Lowe & Berrisford, 2002), notable research on ICT adoption in a virtual clustering context and studies on network use of the Internet as a cooperative e-commerce tool remain in their infancy.

Building on the concept that global positioning and competitive advantage for SMEs may be achieved through connectivity and clustering, this article first explores the conditions for small business network formation underpinned by technology, then presents the results of an action research study with a regional Australian SME tourism network seeking to establish a virtual e-marketing and e-commerce portal environment.

SMALL BUSINESS NETWORKS

Implementing new business models to achieve competitive advantage in the techno-economic innovation paradigm bring to the fore ICT adoption, strategic planning, and network issues.

Research into the adoption of networked technologies by SMEs indicates that the adoption of network structures and networked technologies by SMEs is generally related to the size and nature of SMEs and largely depends on their perception of affordability and business growth opportunities for their business (OECD, 2000). SMEs generally approach clustering and networked infrastructures such as the Internet with caution and hesitate to invest their time and money in a rapidly changing economy. SMEs do not necessarily view the Internet as a vehicle to transform their individual business capability from a parochial to a networked or global level, which may be achieved through the setup of electronic commerce (e-commerce) portals or other Web-enabled cluster structures (Murray & Trefts, 2000). The latter study cites lack of technology skills, lack of a strategic sense of how to move forward, and fear of competitor use of the Internet as significant barriers for uptake of networked technologies by SMEs. Therefore, creating network infrastructures and collaboration between small firms is contingent not only on adoption of ICT technology, but also on economic and social contexts.

European studies on SME positioning in the networked economy point to SME's networking as being contingent on favorable economic conditions, for example, by providing government-sponsored external networks (Cooke & Wills, 1999).

An Asian study similarly provides empirical evidence that successful SME collaboration needs to be underpinned by resources that provide SMEs with the tools to become global players (Konstadakopulos, 2000). The European studies on SME positioning in the networked economy also associate social relationships with enhanced business, knowledge, and innovation performance (Cooke & Wills, 1999). While connectivity through public or private initiatives may facilitate the electronic linking of SMEs to one another for potential business-to-business (B2B) resource and transaction sharing, and help to reduce isolation of individual SMEs, there is another critical factor to consider in terms of network building between SMEs, namely trust.

Trust is an attribute not only of organizations but also of communities, industry networks, or even entire geographic regions, which can help expedite economic development and facilitate large-scale economic activities (Fukuyama, 1995). Trust between network partners is said to

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