Effective Collaborative Commerce Adoption

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INTRODUCTION

Technology increasingly pervades the business world and society generally. According to Walters (2004, p. 219) "markets have globalized, technology has become all embracing, and relationships with suppliers, customers, and competitors are undergoing constant change." These developments potentially raise considerable opportunities for small and medium enterprises (SMEs)[1] to enter into the global marketplace and form "partnerships" including alliances, networks, and collaborative commerce (c-commerce) (Jarrett, 1998). Though exemplars of c-commerce exist in Australia, it has not been widely adopted by SME's.

Generally, Australian SMEs have been slow to adopt any form of electronic commerce. The primary reason given for lack of adoption amongst many small businesses is that they see no real benefit in having a Web presence, that is they perceive their businesses to be too small, or they had not factored in the on going maintenance of Web pages (ABS, 2003; van Beveren & Thomson, 2002). Fear of the unknown and lack of skills have also been suggested as reasons why the uptake of technology is less for small businesses (Barry & Milner, 2002; Darch & Lucas, 2002).

If firms have been slow to embrace e-commerce, then it could explain the slow uptake of c-commerce. This article looks beyond e-commerce and suggests framework to explain c-commerce adoption.

BACKGROUND

C-commerce consists of all of an organization's information technologies (IT) bases, knowledge management, and business interactions with its customers, suppliers, and partners in the business communities in which it interacts (McCarthy, 1999; GartnerGroup, 1999; Burdick, 1999) and can be horizontal competitive cooperation or co-opetition (Levy, Loebbecke, & Powell, 2003), as well as vertical collaboration along a supply chain. Essentially this means that firms, including competitors, come together to exploit an opportunity that arises, as and when appropriate.

C-commerce signifies an organizational shift in focus from transactions and exchange, characteristic of e-commerce, to one of relationships between firms (Sheth, 1996). As global competition intensifies many organizations are forming partnerships as an expeditious way to keep up or to access unique or "pioneering" resources (Ring & Van de Ven, 1992, 1994).

Benefits of C-Commerce for SMEs

C-commerce is concerned with obtaining sustainable competitive advantage from the maximization of value adding benefits obtained by working collaboratively with others via IT. The adoption of IT has been identified as a possible source of strategic competitive advantage for SMEs (Yetton, Johnston, & Craig, 1994), collaboration using IT can generated innovation resulting in further competitive advantage (Ryssel, Ritter, & Germunden, 2004).

SMEs are better able to compete in an increasingly dynamic marketplace via the exploitation of the advantages of the Web (Grover, Teng, & Fiedler, 2002). C-commerce enables small firms to "grow" their assets, which is important for Australian SMEs due to their size and access markets not previously possible (Holsapple & Singh, 2000; Ring & Van der Ven, 1994; Tetteh, 1999;). C-commerce also facilitates innovation and information, knowledge, and systems sharing and exchange (Holsapple & Singh, 2000). Internal efficiencies can be generated by the sharing of information via IT within interorganizational relationships (IORs) (Ryssel, et al., (2004). Bitici, Martinez, Albores, & Parung (2004, p. 266) concluded that collaborative enterprises or networks "create new and unique value propositions by complementing, integrating, and leveraging each other's capabilities and competencies."

To enable SMEs to make the most of the opportunities afforded by c-commerce, SMEs need to "adopt an entirely different approach to strategic planning and management which can enable them to deploy an extensive infrastructure network based on shared resources with other firms" (Tetteh & Burn 2001, p. 171). This requires strategic thinking, trust, and a realization of the importance of co-opting rather than competition which typically exists amongst individual firms. Therefore, c-commerce requires firms to develop a strategy, both short and long term, adopt appropriate business models, develop and sustain appropriate collaborative cultures engendering trust, invest in ICT to facilitate information and knowledge sharing, and set in place appropriate organizational structures to enable collaboration (Kalakota & Robinson, 1999).

Interorganizational systems (IOS), which include c-commerce, represent one use of IT and allow the transfer of information across organization boundaries. SMEs in Australia have tended not to adopt these systems due to the previously mentioned barriers. In the past electronic data interchange (EDI) and electronic funds transfer (EFT) have been the technologies to enter into IOS. The standards required for EDI and the high set up costs have tended to act as a barrier for SMEs to enter into IOS. This is potentially overcome by the Internet which facilitates participation by SMEs in c-commerce.

It can be argued that c-commerce is the next step following adoption of the full functionality of e-commerce and e-business. Whether there is a linear progression from e- to c-commerce is debatable given the differing antecedents. A number of models have been developed that depict a progression of the application of e-commerce such as the DTI Model (Martin & Matlay, 2001).

Adoption of e-commerce or e-business cannot be said to be a direct precursor to c-commerce. However the "technology" required in these preceding stages needs to be in place for c-commerce to occur. The technology required to enter into c-commerce is more complex and involves other hardware and software in addition to the internet, as well as other factors.

THREE DIMENSIONS FOR THE ADOPTION OF C-COMMERCE

The literature reveals that three major areas are important to c-commerce adoption by SME's. The factors identified are IORs, resources, and the degree of IT integration within business strategy and will be discussed.

Depth of Interorganizational Relationships (IORs)

Global competition is increasingly occurring between networks of firms (Morgan & Hunt, 1994), and so partnerships, including c-commerce, are being established. This requires firms to choose appropriate partners and determine and agree upon the management of relationships (Ring & Van der Ven, 1992; 1994; Ritter, Wilkinson, & Johnston, 2002).

In the context of this article, IORs refers to cooperative IOR's that include strategic alliances, partnerships, coalitions, joint ventures, franchises, and network organizations. This article has adopted the framework developed by Holmlund and Tornroos (1997) that describes a number of dimensions of IOR's; Structural (the resource links, connections with other organizations through the IOR, and the institutional bonds such as contractual agreements); Economic (financial investment made in the relationship and expected economic returns form the relationship); and Social (relational concepts including characteristics such as trust, commitment, attractions, atmosphere, and social bonds).

The authors have added the dimension of "Organizational" to encompass characteristics that relate to how the organization interacts with others. Table 1 builds on these dimensions and summarizes factors deemed to be critical, to collaborative IORs and so c-commerce. The extent to which these factors explain the adoption of c-commerce or antecedents to its adoption need to be considered in subsequent research.

A coming together around IT is secondary to the formation and existence of relationships between firms since they underpin collaborative relationships (O'Keefe, 2001). Without the cultivation of relationships, firms are not able to capture the full value of technology (O'Keefe, 2001). Such a coming together will only occur if the shared benefits are acknowledged and are deemed to be worth-

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