

**Chapter 20****Evaluation of Electronic
Commerce Adoption within SMEs**

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The exponential growth that has recently characterized the diffusion of electronic commerce (EC) applications could lead companies of any size to plan new investments, in order to compete in an increasingly dynamic market. The first business experiences show that EC should be considered a competitive instrument not simply affecting economic transactions, but significantly influencing the business organizational structure and strategic objectives. Although this issue has recently been object of considerable attention, the research on the evaluation of EC adoption for Small and Medium Enterprises (SMEs) is still relatively new. This chapter aims at supporting SMEs in choosing the most suitable EC approach according to their peculiarities and strategic goals. First, it identifies five EC approaches supporting different business activities. Then, it describes the business variables involved in any EC project and identifies four SME profiles characterized by different values of these variables. Finally, a cross analysis between EC approaches and SME profiles allows developing a framework suggesting the most suitable EC solution for each business profile.

INTRODUCTION

“Every business today competes in two worlds: a physical world of resources that managers can see and touch, and a virtual world made of information” (Rayport & Sviokla, 1996). In such a virtual world, Electronic Commerce (EC) is becoming

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ing increasingly imperative for companies of any size aiming at improving their competitiveness in a constantly changing market (Chaumont, de Charentenay, Esnault, Fay, Iglesias & Silvestre, 1998; OECD, 1998), since its impact is not limited to economic transactions but can significantly influence both organizational and strategic issues (COM, 1997). In this chapter, we will refer to *Internet-based EC*, i.e., any commercial activity carried out through the Internet.

Although some research has been carried out to analyze the relationships between Small and Medium Enterprises (SMEs¹) and EC, the real opportunity of EC adoption for SMEs is still unclear. A lot of research (Davies, 1997; Ford & Baum, 1997; Loeb, 1998) shows that most SMEs are not making use of EC because of information security problems (a serious concern for SMEs, traditionally jealous of their privacy) and the legislative uncertainty (Baker, 1998; Mitrakas, 1997; OECD, 1998).

Nevertheless, the main obstacle to the adoption of EC and modern Information and Communication Technologies (ICT) among SMEs seems to be the lack of knowledge about the real advantages these technologies could add to their business (Buonanno, Ravarini, Sciuto & Tagliavini, 1998; OECD, 1998) and, more generally, the culture and resistance to change that characterizes small entrepreneurs (Bedeian, 1980; Huczynsky & Buchanan, 1991; Julien, 1998; King & Teo, 1994; Palvia, Means & Jackson, 1994; Vidal, 1991).

This chapter aims at supporting the entrepreneur in choosing the most suitable EC approach for his/her organization and its strategic goals. In order to be suitable for SMEs, the reference schema must be simple, easy to use and clear enough to be understood by people without specific technical and economic skills.

Next sections will outline five EC approaches, characterized by different requirements as well as objectives achievable through their implementation. Then, the expected results of the EC implementation, together with the analysis of existing literature, will support the identification of the business variables possibly involved in EC projects. In particular, we will describe:

- the key-variables for implementing the project (i.e. the variables determining which is the most suitable EC approach to every kind of business); and
- the key-variables related to strategic changes achievable through EC (i.e. variables that are expected to change their values as a consequence of EC adoption).

The description of the involved business variables together with the results of a survey on a sample of 55 SMEs will lead to the identification of four SME profiles (characterized by different values of these variables). Finally, a cross analysis between these profiles and the EC approaches will support the detection of the EC approaches that best fit these profiles (Figure 1).

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