IDEA GROUP PUBLISHING
701 E. Chocolate Avenue, Hershey PA 17033-1117, USA
Tel: 717/533-8845; Fax 717/533-8661; URL-http://www.idea-group.com
ITB7059

Chapter II

Adoption and Use of Computer Technology in Canadian Small Businesses: A Comparative Study

Linda Duxbury
Carleton University, Canada

Yves Decady
Statistics Canada, Canada

Angel Tse
Carleton University, Canada

INTRODUCTION

This chapter examines the impact of company size on the adoption, use and perceived impact of computer technology in Canadian businesses. Such research is critical for several reasons. First, while there is a large body of research that examines the adoption, use and impact of computer technology, most studies either ignore workplace size or focus exclusively on medium and large workplaces. That research which is available would suggest that small businesses differ in many key ways from larger organizations. They are, for example, more likely to: (1) have simple and highly centralized structures, (2) experience severe financial constraints on growth, (3) lack trained personnel resources, and (4) take a short-range management perspective imposed by a volatile competitive environment (Welsh and White, 1981). These differences

This chapter appears in the book, Managing Information Technology in Small Business: Challenges and Solutions by Stephen Burgess.

may mean that organizational theories and practices on firm adoption and use of computer technology which have been developed from research on large businesses may not be applicable to those who operate in the small business sector. As Igbaria et al. (1997) note, the differences between the computing environments of small and large organizations make it necessary to develop an IT implementation model specifically for small businesses. Welsh and White (1981) concur and observe that small businesses are simply "not a little big business."

Second, most research on computer use in small business has grouped businesses of various sizes (that is under 99 employees, under 200 employees) into one category for study, with the assumption that all small businesses have similar computing applications needs and adoption practices (e.g., Malone, 1985; Nickell and Seado, 1986). Little is known, therefore, about the implications of relative company size on the use of computer technology.

Third, our previous research with small businesses would suggest that owners of Canadian small businesses are becoming more interested in computer technology (Duxbury and Higgins, 1999). This interest originates in an increased awareness that the appropriate use of computer technology may play an important role in small business success or failure. Kagan et al. (1990) also report that small business executives have become more concerned about the importance of information technology. They attribute this increased interest to the following: (1) their competition is adopting technology and using it effectively, (2) the cost of IT has decreased and the perceived benefits have increased, (3) more user-friendly systems are being developed that can be implemented by small business firms without a high degree of computer expertise. In addition, the deregulation of telecommunications (and lower cost) has created new dynamics and strategic opportunities for small firms to deploy technology to mask their size from their external partners (e.g., electronic data interchange) (Lin et al., 1993).

Finally, research in this area is critical because of the increasing economic importance of this sector to the Canadian economy. The following data illustrates this assertion. There were approximately two million businesses (with employees) in Canada in 1993. Of these businesses, 97% had fewer than 50 employees, and 99% had fewer than 100 employees (Industry Canada, 1995). Data for 1993 (the last year such detailed data are available) show that while there were 25% more businesses in 1993 than 1983, 99% of these new businesses were small or medium enterprises (SMEs) (Industry Canada, 1995). A second measure of the vitality of this sector is its contribution to the Canadian GDP. SMEs were estimated to contribute to some 57% of total private sector GDP in 1993, up 3.8% from the level reported in 1983 (Industry Canada, 1993).