Information Systems Effectiveness in Small Businesses: Extending a Singaporean Model in Canada

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ABSTRACT

This study examines the applicability of the Thong, Yap, and Raman (1996) model of information systems (IS) effectiveness tested among Singaporean small businesses in a Canadian context. The model evaluates the importance of managerial support and external expertise (vendors and consultants) for IS effectiveness. This study extends the Thong et al. model by adding an intention of expansion construct. The sample included 105 small business users of IS in a small city in western Canada. The results show that both managerial and vendor support are essential for effective IS in Canadian small businesses, and supported part of the relations between IS effectiveness and intention of expansion. Overall, the results suggest that managers should engage quality vendors to obtain IS that contribute to the specific goals of the small business. The results of the Canadian study were, for the most part, similar to the results reported in the Singaporean study; however, a few notable differences appear to exist.

Keywords: effectiveness; information systems; information technology adoption; IS success; small business;

INTRODUCTION

The capacity of a country’s economy to adapt to changing demands has been linked to and achieved by the flexibility and responsiveness of small businesses (Hunter & Long, 2003). Furthermore, governments and economists view small firms as the mechanism by which national growth is created (Pollard & Hayne, 1998). In 1997, Industry Canada reported that there were over 2.3 million small businesses with fewer than 100 employees, which accounted for over 50% of the private-sector employment and for 43% of the total economic output of the country (Hunter, Diochon, Pugsley, & Wright, 2002). One year later, the Canadian Federation of Independent Business estimated that between 84% and 87% of all Canadian businesses could be classified
as small (Pollard & Hayne). These data demonstrate that small businesses are essential for the prosperity of Canada.

Furthermore, as an economy based on knowledge emerges, information is essential for any ongoing organization (Pugsley, Wright, Diochon, & Hunter, 2000). The globalization of products, services, markets, and competition has increased the need for flexibility, quality, cost effectiveness, and timeliness (Hunter et al., 2002). A key resource for attaining these requirements is information systems (IS). Consequently, IS has revolutionized business practices (Hunter et al.) and now plays a more central part of business strategies (Pollard & Hayne, 1998).

However, small businesses have unique characteristics and, in fact, researchers have found that firm size is directly associated with IS success (Choe, 1996; DeLone, 1981; Raymond, 1985). The concept of “resource poverty” (Thong, Yap, & Raman, 1994; Welsh & White, 1981) provides one explanation for this uniqueness. According to Thong et al. (1996), resource poverty refers to the lack of financial and human resources. The lack of financial resources forces small firms to make minimal commitments that are often spread out at different moments in time (Hunter & Long, 2002). For example, Duxbury, Decady, and Tse (2002) found that the main perceived barriers to the implementation of computer technologies among Canadian small businesses were the lack of financial resources and skilled personnel. Furthermore, small business managers tend to adopt a “promoter” role (Stevenson, 1999), responding to opportunities within a very short period of time (Hunter & Long). Hence, small businesses are flexible organizations that facilitate rapid and accurate assessments of their environments in order to respond to the goal of gaining opportunities (El Louadi, 1998). This leads to an absence of formal planning in the decision-making context of small firms (Lefebvre & Lefebvre, 1988). Consequently, results regarding large-business IS environments may not apply to small businesses (Ein-Dor & Segev, 1978; Raymond, 1985). Thus, Burgess (2002) suggests that there is a need to conduct additional IS research within the specific framework of small businesses.

This study has two main objectives. The first objective is to test the Thong et al. (1996) model of IS effectiveness in a Canadian small business environment and to compare the Canadian results to the Thong et al. results in Singapore. IS effectiveness refers to the IS contribution in the achievement of organizational goals (Raymond, 1990). There are two main reasons for choosing the Thong et al. study for the basis of this research project. First, the Thong et al. study uses Attewell’s (1992) theory of technology diffusion to cumulate some of the factors identified by the literature as affecting the IS effectiveness of small businesses. These factors include managerial support (i.e., DeLone, 1988; Igbaria, Zinatelli, Cragg, & Cavaye, 1997) and external IS expertise (i.e., Thong, 2001; Thong et al., 1994; Yap, Soh, & Raman, 1992). The Thong et al. model tests the influence of managerial support and external IS expertise on IS effectiveness. Second, the Thong et al. model has not been tested within a Canadian environment. In terms of Hofstede’s (1980) cultural dimensions, Singaporean and Canadian societies are different. Although the two cultures show little difference with respect to masculinity, Singapore tends to have lower uncertainty avoidance and lower individualism than Canada (Hofstede). In addition to this, Canada has a relatively more equal distribution of power than Singapore.
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