IT Management Practices in Small Firms

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INTRODUCTION

Computer based information systems have grown in importance to small firms and are now being used increasingly to help them compete. For example, many small firms have turned to the World Wide Web to support their endeavours. Although the technology that is being used is relatively well understood, its effective management is not so well understood. A good understanding is important as the management of IT is an attribute that has the potential to deliver a sustainable competitive advantage to a firm (Mata, Fuerst, & Barney, 1995). This chapter shows that there is no one accepted view of the term "IT management" for either large or small firms. However, the term "management" is often considered to include the four functions of planning, organising, leading, and controlling. This framework can be applied to small firms and specifically to their IT management practices.

BACKGROUND

What is meant by the term "IT management"? There are a number of frameworks that can help us understand the concept of IT management. However, most frameworks are based on large firms, with only two specific to small firms, presented in studies by Raymond and Pare (1992) and Pollard and Hayne (1998).

There are three interrelated terms that are frequently used in the literature with respect to the management of computer-based technology: IT management, IS management, and information management.

Two of the terms, Information technology (IT) management and Information systems (IS) management usually refer to the same phenomenon. These terms typically refer to managerial efforts associated with planning, organising, controlling, and directing the introduction and use of computer based systems within an organisation (Boynton et al., 1994). This characterisation is in agreement with the definition of "management" described in classical management literature expressed as a process of four functions, namely planning, organising, leading, and controlling[1] (Schermerhorn, 2004). We see little advantage in attempting to distinguish between IT and IS. Thus, IT management and IS management refer to the same activities, that is, to the organisation's practices associated with planning, organising, controlling, and directing the introduction and use of IT within the organisation.

Table 1 provides examples of the concept of IT management, but before that we should clarify the term information management. It is a term which has frequently been used by authors to refer to two different but related activities. Some conceptualise information management as a process comprised of planning, organisation and control of information resources (see Figure 1 based on Earl, 1989). Thus Earl's information management is the same as IT management, as described above. However, other authors use the term information management to

Figure 1. Earl's model of information management (Earl, 1989)

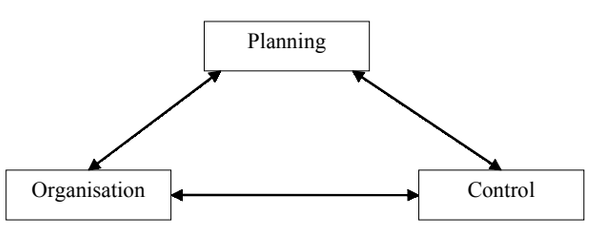

Table 1. Key aspects of IT management

Key Issues in IS Management in Small Firms Pollard & Hayne (1998)	Core IS Capabilities Feeny & Willcocks (1998)	IT Best Practices Cragg (2002)	IT Management Processes Luftman (2004)
IS for competitive advantage IS project management Software development Responsive IT infrastructure Aligning IS Technological change Communication networks Business process redesign Educating users IS human resource	IS/IT Leadership Business systems thinking Relationship building Architecture planning Making technology work Informed buying Contract facilitation Contract monitoring Vendor development	Managers view IT as strategic Managers are enthusiastic about IT Managers explore new uses for IT New IT systems are customised Firm employs an IT specialist Staff have the skills to customise IS	Strategic planning and control Management planning Development planning Resource planning Service planning Project management Resource control Service control Development and maintenance Administration services Information services

recognise that organisations have information that needs to be managed. For example, Osterle, Brenner, and Hilbers (1991) claim the fundamental responsibility of information management is to ensure that the enterprise recognizes and harnesses the potential of information as a resource. This view of information management is an important subset of IT management. "IT management" as a broader term, recognises that an organisation has to manage information, as well as hardware, software, people, and processes.

The above discussion defined IT management as practices associated with planning, organising, controlling, and directing the introduction and use of IT within an organisation. Table 1 provides some examples of these practices, based on the work of Cragg (2002), Feeny and Willcocks (1998), Luftman (2004), and Pollard and Hayne (1998),.

Notes for Table 1:

a. Pollard and Hayne (1998) examined the key issues of IT management in small firms in Canada using the Delphi technique. The 10 most critical issues that small firms expect to face in the 1995-2000 era are given above.
b. Feeny and Willcocks (1998) presented nine core IT capabilities based on the experience of large US-based companies. They stated that these capabilities "are required both to underpin the pursuit of high-value-added applications of IT and to capitalise on the external market's ability to deliver cost effective IT services."
c. Cragg (2002) identified six IT management practices that differentiated IT leaders from IT laggards amongst 30 small engineering firms.
d. Luftman (2004) argues that there are 38 IT processes that have to be managed, whatever the size and type of the organisation. Some of these are at a strategic level (long term), some at a tactical level (short term), and others operational (day to day).

MAIN FOCUS OF THE ARTICLE

Two of the sources in Table 1 are based on studies of small firms, such as Cragg (2002) and Pollard and Hayne (1998). These studies show that many IT management processes are similar for both large and small firms, but typically small firms have to manage IT with low levels of internal IT expertise. Thus, small firms often rely heavily on external expertise, as highlighted by several researchers (Fink, 1998; Gable, 1996; Thong, Yap, & Raman 1996). For example, many small firms have no person with a formal IT education. Thong et al. (1996) observed that small businesses rely on consultants and vendors in IT project implementation, and IT effectiveness is positively related to the consultant's effectiveness in such firms.

Numerous studies of IT in small firms have shown that managers within the firm play a key role in both the introduction of new systems and its subsequent success. For example, Caldeira and Ward (2003) concluded that "top management perspectives and attitudes" were one of the two key determinants of IT success in small firms. However, most small firms do not have an IT manager, that is, a person who has IT as their prime managerial responsibility. As a result, many studies have recognised that IT management practices are weak in many small firms, relative to large firms. Fink (1998) argues that the management effort towards IT in small firms is negligible in comparison with that in large firms.

Although the IT managerial processes may differ in small firms, it is not proper to infer that small businesses have absolutely no practices in place for managing their IT. For example, Cragg (2002) pro-