

# Chapter 1

## Do Organizational Memory and Information Technology Interact to Affect Organizational Information Needs and Provision?

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### ABSTRACT

*The results reported in this chapter were obtained through the study of 43 work-units belonging to five business firms in a large group of Tunisian companies. Using the declarative, procedural and judgmental dimensions of organizational memory, interaction effects were detected between IT and organizational memory. Analyses of the data support the view that storage technologies interact with declarative memory contributing to reduce organizational information needs. But, contrary to expectations, storage technologies interact negatively with declarative memory on information provision. Furthermore, network technologies interact negatively with judgmental memory on information provision. These results raise issues that have been rarely encountered in the literature.*

### INTRODUCTION

Internal organization's information-processing capacity has almost always been related to

structural and technological mechanisms (Cummings & Cross, 2003; Girod, 1996; Huber, 1990; Walsham & Barrett, 2005). Quicker and easier access to external information and knowledge is

becoming increasingly more important to organizations. Since the 1990s, the accumulation of data and information in organizations files and databases led researchers' interest to the study of organization memory too (Souren et al., 2004). Organization memory has become an additional mechanism allowing organizations to store, process, and disseminate information with the aim of speeding up organizational learning (Child & Rodrigues, 2001; Cohen, 1991).

Unfortunately, there has been very little empirical research on organizational memory and its relationship with the amounts of information needs and provision to date, despite the increasing realization that organizations are becoming more knowledge-based, relying not only on their computerized information systems but also on information and feedback from workers, customers, and partners. Even so, the knowledge-based company depends increasingly on knowledge, that is, patents, processes, management skills, old-fashioned experience, past failures and successes (Levitt & March, 1988; Walsh & Ungson, 1991). This is especially true in the case of organizations whose members are specialized in some particular task and where learning occurs essentially by doing. Such companies have managers who need to access more information about more aspects of the business, from more parts of the organization, and in shorter time spans (Huber, 1984).

While organizations develop uncertainty-reduction mechanisms by increasing their information-processing capacities favoring the acquisition, creation, and flow of new information (Galbraith, 1977), some other mechanisms are needed for the processing of information that the organization already possesses in order to foster learning. Some of the knowledge needed is accumulated in databases and archived documentation but the most important part lies in people's heads (Nonaka, 1995). An organization's knowledge capacity is therefore a function of the sum of everything everybody in the organization knows (Aschcraft, 1994; Walsh & Ungson, 1991).

Organizations do not need knowledge about past events only. They also need knowledge about past and present happenings and experiences. Learning cannot be dissociated from memory (Lehner et al., 1998, Walsh & Ungson, 1991); it is "...a process that involves the discovery, retention, and exploitation of stored knowledge" (Moorman & Miner 1998, p. 705). Mechanisms related to accumulated information about past and present events are collectively known as the organizational memory (Stein & Swass, 1995; Walsh & Ungson, 1991).

Past research has not always been consensual regarding the concepts of organizational learning, knowledge management, and organizational memory, probably due to the many disciplines in which they are studied. As a result, researchers and managers are often unclear as to what constitutes what.

Nickols (2001) attributes three meanings to the word "knowledge." The first refers to the "state of knowing" and is very close to what we commonly call the "know about." The second refers to the "the capacity for action" and is very close in meaning to what we call "know how." The former and the latter meanings thus point to the result of the cumulated knowledge. The third meaning refers to that which is codified and accumulated: facts, methods, principles, techniques, and so forth, in short, to that which was captured in the form of books, papers, formulae, formal procedures, computer code and so on (Nickols, 2001).

For Dodgson (1993, p. 377), organizational learning is building, supplementing, and organizing knowledge and routines around activities and within cultures by improving the use of the broad skills of the organization's workforces, leading to a change in behavior or, at least to a change in the range of potential behaviors (Huber, 1991). In order to be valid as organizational learning, this knowledge must be stored in the memory of the organization (Ortenblad, 2001). For Jennex and Croasdell (2004), organizational learning is the development of shared meanings and inter-

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