Chapter 15

Information Technologies (ICT), Network Organizations, and Information Systems for Business Cooperation: A Focus on Organization and Strategic Knowledge Management

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ABSTRACT

Information Technologies (ICT) have developed systems and network organizations that foster the creation of resources for company management. The establishment of strategic alliances and business cooperation systems has been encouraged by ICT and information systems management. This focus on organization and strategic knowledge management shows the capabilities they provide in managing organizations’ intangible assets, information and knowledge, since they are a competitive advantage. Network organizations, intercompany systems, cooperation, and alliances with the support of ICT are the paths to enterprises growth and development.
INTRODUCTION: THE DEVELOPMENT OF ICT AND NETWORK ORGANIZATIONS

The globalization of the economy, the knowledge society and the development of telecommunications are turning the world into a single space and an instant virtual reality. Starting from the “system theory” we can approach the world of Information Technologies (hereafter ICT) and regard it as a vast network of interconnected systems with subsystems and in turn with the components of each one of them which influence each other.

In the words of Bueno (2000), “it has been evident over the last century that without the contributions of Einstein and scientific development that they have caused we would not be talking about the Information Society today.” As a consequence of it, over the past three decades we have seen a great scientific and from the academic community interest with the publication of studies, which predicted an increase and improvement of the results in those companies which invested in Information Technologies (ICT), associating recently the investment in ICT with positive effects in organizations, apart from the alignment between business strategy and Information Systems for Management. It is also remarkable other works on the zero, even negative productivity growth in ICT intensive firms (Brynjolfsson and Hitt, 2000).

The time variable forces to raise the two following premises in the universe of permanent and instant connections linking ICT: (1) changes occur in an accelerated manner. Organizations able to evolve and adapt to the market, are the ones most prone to accept changes. (2) The response must be immediate. The organization achieving success will be the best prepared to deal with the element of surprise (Cegarra et al., 2007).

According to Rincón (2003), organizations from this perspective relate to each other, creating and extending links between them, even blurring their boundaries in moments of collaboration, existing the possibility of situations of conflict, competition, or monopoly. In this context the “network” is born as a modern organizational form, born to respond to a new management style and a new way of organizing relations between companies. This indeterminacy shows above all a break with the classical theories about the firm and organization (Mendoza and Planellas, 1995).

Organizations are dynamic entities that welcome new individuals within it, see how others leave, establish evolutionary relationships with their environment and change their orientation more or less voluntarily. As we have seen, the function of organization is to establish an intentional structure of roles for members of an organization in order to ensure identification of all tasks necessary to achieve the objectives (Ribeiro, 1992). That is to say, organizing basically means dividing and allocating work among members of the organization. In addition, so that this division will achieve the objectives it is necessary to establish coordination mechanisms.

From the moment the company is considered as conscious organization of individuals willing to comply with their aspirations, is explicitly recognized the conflict of objectives and the differences in knowledge among the participating members. Both elements are key dimensions on which design economic theories and inner workings of organizations revolve (Salas, 1987) and, from this perspective, the important thing is to select those alternatives that solve the constraints due to the situation of partial and asymmetrical knowledge of members, as well as the different interests expressed among them (Saiz and Manzaneda, 1998).

From a strategic point of view the objectives of the company are focused primarily on finding a competitive advantage through cost rationalization, progress against the competition in terms of market needs, quality, design, etc., and to provide services and products to the market in a fast and competitive way (White et al, 1995).

To achieve these objectives the company has to take two types of strategy: internal and exter-