Chapter 6.5

Inter–Organizational Information Systems and Strategic Alliances:
Symbiosis or Competition?

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ABSTRACT

In this chapter we analyze the relationships between the structures of inter-organizational information systems (IOS) and strategic alliances. The relationships between both structures tends to be framed within a collaborative dynamic in which the IOS serves the objectives of the alliance, thereby reinforcing the links that bind the alliance members together. However, in this chapter we also suggest that there may be a non-collaborative—that is, competitive—relationship between the IOS and the strategic alliance, especially when both structures compete for firms from the same sector and geographical area. To test our hypotheses we have analyzed a sample of 162 firms belonging to the agro-food sector in Spain.

INTRODUCTION

Information and communications technology (ICT) and information systems (IS) have had—and indeed continue to have—growing influence on the way firms are managed and organized. There can be no doubt that the lion's share of the modern organization's value chain has been changed in one way or the other by the introduction of computing, robotics, or telecommunications tools (Porter & Millar, 1986). ICT is likely to have a major impact on the components of the value chain that are most closely related to supplies, transport, or data processing. Moreover, in recent decades most of the primary or support activities of firms' value chains have gone through a process of intensification in terms of their need for information management, so ICT

has been playing an increasingly important role within organizations.

However, one component of the ICT revolution that we have experienced (and that is still going on) has not taken place within the limits of the traditional organization, but has originated in the relationships that link organizations with each other. The sharing of resources and the collaboration (at the same time as competition) between organizations has meant that a large part of firms' managerial, financial, and productive resources have begun to acquire a virtual dimension. By means of this virtualization firms can make use of resources and capabilities that are geographically dispersed and, more importantly, that originally belonged to other institutions. The technological revolution therefore leads to a revolution in the relationships between firms and organizations, which put resources and capabilities into common use with the aim of improving individual competitive positions. The main advantage of inter-organizational cooperation comes not only from the possibility of accessing virtualized resources but of doing so much more cheaply than would be the case if these resources were acquired on the market for their individual use.

A direct consequence of this virtualization of resources and of the cooperation between institutions is the appearance of IOS (Kauffman, 1966; Konsynski, 1993) and of strategic alliances and networks (Gulati, Nohria, & Zaheer, 2000). Strategic alliances and IOS have traditionally been regarded as two sides of the same coin. Thus, many strategic alliances and stable cooperation agreements have as their main aim to create or strengthen an IOS (Medina Garrido & Bruque Cámara, 2004; Pigni, Ravarini, Sciuto, Zanaboni, & Burn, 2004). In this way, firms can either reduce the uncertainty inherent in today's complex environments or alternatively cut the transaction costs deriving from their relationships with other organizations (Ciborra, 1990; Gulati et al., 2000; Malone, Yates, & Benjamin, 1987).

However, the literature has shown little interest in situations in which the IOS and the strategic alliance interact competitively. In these cases the appearance of an IOS could actually destabilize the system of psychological or economic incentives that bind the members of a strategic alliance together. The disparity of structures and interests, or simply mutual ignorance, can lead to situations in which the IOS erodes the structure of the alliance. Thus, in this chapter we attempt to gain more knowledge about this question, illustrating the situation that occurs when IOS and alliance act competitively—that is, non-symbiotically—and suggesting some explanations for the problem. These explanations will provide us with the basis for offering a number of implications and recommendations, using data from the olive oil production sector in Spain.

This chapter is organized into five sections following on from this present introduction. In the second section we review the state of the question and propose our working hypotheses. In the third we describe the methods utilized to test the hypotheses. In the fourth we outline our findings. In the fifth section we outline our main conclusions, while in the final section we offer a series of recommendations for firms and public administrations, as well as directions for future research.

BACKGROUND AND HYPOTHESES

The relationship between the use of IOS and opting for the market (autonomy), hierarchy, or strategic alliance, has been widely studied in the literature (Brynjolfsson, Malone, Gurbaxani, & Kambil, 1994). In most previous analyses researchers have demonstrated that the IOS and strategic alliance come into being in a coordinated way with the aim of achieving similar objectives (Henderson & Venkatraman, 1993). The IOS serves to achieve the objectives set down by the alliance in terms of information management and the conversion of

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