Chapter I

An Introduction to Inter-Organizational Information Systems with Selected Bibliography

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Abstract

One of the important roles of information technology is to permit firms to manage organizational interdependence. Over the past two decades, the concept of inter-organizational information systems (IOISs) has emerged as a strategic tool for achieving competitive advantages and IOISs have been a major research theme. Many well-known examples of information systems that provide competitive advantages discussed in the literature are those of IOISs. This chapter provides the readers with a brief overview of foundational concepts, definitions, and the information technology infrastructure of IOIS. Finally, the chapter systematically classifies the IOIS literature of 192 bibliographic items into 10 subspecialties. Therefore, along with this survey of 192 bibliographic items, readers are referred to Ngai and Wat’s recent survey (Ngai & Wat, 2002) to comprehend the big picture of IOISs.
Introduction

In 1989, researchers at MIT’s Center for Information Systems refocused the issue of the organizational impact of information technology. After reviewing abundant theories that had been proposed, Rockart and Short (1989) argued that information technology’s most important role is permitting firms to manage organizational interdependence:

*For more than two decades, the question of what impact information technology (IT) will have on business organizations has continued to puzzle academics and practitioners alike. Indeed, in an era when the business press has widely disseminated the idea that IT is changing the way business operates and the way they relate to customers and suppliers, the question of technology’s impact on the organization itself has gained renewed urgency.* (p. 7)

*We will argue here that information technology (IT) provides a new approach to one of management’s oldest organizational problems: that of effectively managing interdependence. Our fundamental thesis is that a firm’s ability to continuously improve the effectiveness of managing interdependence is the critical element in responding to new and pressing competitive forces.*

Over the past two decades, the concept of the inter-organizational information system (IOIS) has emerged as a tool for achieving competitive advantages. The IOIS has been a major research topic. Many well-known examples of information systems that provide competitive advantages discussed in the literature (Porter & Millar, 1985) are those of IOISs. The purpose of this chapter is to provide readers with the foundational concepts and a brief overview of the IOIS literature. There are few guideposts that help students and researchers understand the current state of the IOIS, partly due to the fuzzy definitions of the IOIS and the complex and evolving nature of the IOIS information technology infrastructure. For example, private network-based traditional electronic data interchange (EDI) and Internet-based EDI are examples of IOIS technologies. To study Internet-based EDI, researchers and students also need to understand ongoing changes in foundational telecommunication technologies, standards for encapsulating messages, cheaper alternative message transport mechanisms created by combining the Web, XML, and Java, and other protocols. Ideally, a comprehensive literature survey should include all these topics. However, the breadth and depth of IOIS-related topics may make it almost impractical.
Feral Information Systems and Workarounds: The Present Position
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