

# Chapter 1.17

## Innovation and B2B E-Commerce: Explaining What Did Not Happen

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### ABSTRACT

The massive wave of enthusiasm for B2B (business-to-business) e-commerce generated with the “dot-com” boom led many to believe that a fundamental transformation of how firms bought and sold products was just around the corner. The new “wired” world of commerce would lead to real-time, Internet-driven trading, with significant implications for — amongst other things — the nature of buyer-supplier relationships, pricing, and the management of industrial capacity. Despite the excitement, such a transformation has largely failed to materialise, and whilst there has been a limited uptake of B2B innovations (for example, the use of online reverse auctions), the fundamental character of B2B trade has remained mostly unchanged. Drawing on a multi-stranded empirical study, this chapter seeks to explain the divergence between the expected and realised degrees of innovation.

### INTRODUCTION

The extraordinary rise and fall of the late 1990s **technology bubble** was not the first speculative boom of its kind — and presumably will not be the last. As with the successive 19<sup>th</sup> century booms relating to the railways, the frenzy was accompanied by an astonishing explosion of rhetoric, folklore, and intellectual and managerial fashion — crudely, “hype.” This led to a significant flurry of innovation, particularly in the founding of large numbers of **Internet-based intermediaries** (“hubs” or “exchanges” Bakos, 1991, 1998; Bloch & Catfolis, 2001; Barratt & Rosdahl, 2002; Le, Rao, & Truong, 2004). Investors and organisations poured vast sums into these ventures and, for the most part, lost their money. Consultants and investment banks made shrill claims that **interorganisational trade** would be transformed, but the predicted revolution failed to materialise.

I address two central questions in this chapter. The first is the simple question: Why did the revolution not happen? The second is: What substantive ideas for business practice can be salvaged from the wreckage? This is an important task; to adapt George Santayana's famous quip, those who do not understand the past are condemned to repeat it.

One feature of published work in this field is that there has been relatively little solid empirical material; on the other hand, there has been a great deal of generalised comment and unsupported speculation regarding the causes and consequences of the bursting of the **B2B bubble**. Day, Fein, and Ruppertsberger (2003) present an analysis that emphasises the similarities with other "shakeouts" associated with disruptive technologies.

This chapter reports the results of a multi-stranded investigation into the extent to which organisations are prepared to make use of the Internet in buying and selling, and into the patterns of life and death of **B2B exchanges**. Unlike much of the literature in this area, which has largely focused on leading companies or the few successful hubs, this chapter concentrates more on the opportunities and obstacles that face "ordinary" organisations, and the innovations which failed. The logic behind this is that there is often much to be learnt about the process of innovation from the mundane and the typical. The purpose of this study was not to recount the organisational success stories of leading firms — others have done that before, and the *potential* benefits of B2B e-commerce are well documented (e.g., Sculley & Woods, 1999; Timmers, 2000; DeMaio, 2001; Raisch, 2001). For this study, the challenge was to understand the reality of organisations' experiences, and to gauge the key issues and obstacles that they face.

## BACKGROUND: THE B2B PHENOMENON

A simple starting point to the complex origins of the **B2B e-commerce** phenomenon lies in the well-established technologies of **electronic data interchange (EDI)**. At the beginning of the 1990s, for many industries, the direct system-to-system transfer of data over proprietary networks following industry standard protocols had become a routine element of doing business. The technology allowed significant savings from both increasing the speed and accuracy of data transmission, and in some cases was progressing to more advanced uses whereby buyers and suppliers could not only manage routine transactions but also "see" into each others' systems, facilitating such operational innovations as *collaborative planning forecasting and replenishment*, and *vendor managed inventory*. In addition, electronic linkages also were developing for the easier sharing of technical and design data, encouraging inter-firm collaboration in technical design. The downside of these "**inter-organisational information systems**" were the considerable "hook up" costs incurred by the parties involved, a fact which limited the adoption of the technologies by smaller suppliers, often faced with meeting the costs of linking their own systems with the non-matching requirements of several customers. In parallel, in the academic literature, there was a limited debate as to the long-term effects of these technologies on firms' switching costs, and good arguments could be made for expecting both a reduction and increases in market "stickiness," and the consequential shift to purer "markets" or growing "hierarchies," respectively (Malone, Yates, & Benjamin, 1987; Bakos, 1991). The debate was rather theoretical, and was rather neglected outside of a handful of learned journals.

The arrival of the Internet, and its adoption by businesses as a serious tool for business, however,

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