Chapter 11
The Benefits of an E-Business Performance Measurement System

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ABSTRACT
This chapter investigates how organizations have been adapting their performance measurement practices in response to their adoption of e-business in their business operations. It aims to identify the features and benefits of an effective e-business performance measurement system. Twelve organizations known to have had some success in developing performance measurement systems suitable for the online environment were studied. The researchers found that these organizations adopted an incremental rather than a radical approach to changing their performance measurement system for e-business, thereby avoiding the costs and disruption associated with the introduction of more complex performance metrics. Secondly, they eschewed the use of best practice recipes (such as the balanced scorecard). The study concludes that although these results may be at odds with the prescriptive generic performance measurement literature, they may be appropriate for the current state of development of e-business.

INTRODUCTION
This chapter draws on research investigating how organizations in the UK have been adapting their performance measurement systems and practices, in response to changes in the adoption of e-business in their business operations. The research was aimed at identifying the features and benefits of an effective e-business performance measurement system. There has been increased interest in business performance measurement in recent years, particularly in ‘portfolio’ approaches, such as the Balanced Scorecard, which incorporate a wide range of performance measures in addition to traditional financial measures. However, there is a marked absence of any widely accepted approach to measuring e-business performance and little research seems to have been conducted in this field. It is far from clear how, or even if, existing models of performance measurement need to be
modified to make them suitable for the needs of e-businesses. As such, there is no agreement on what should be the basis for an e-business performance measurement system. This research was aimed at addressing this deficiency. The objective of this chapter is to describe the research that was conducted and report its main findings.

**BACKGROUND**

E-business is defined as the use of Internet-based information and communication technologies (ICTs) to conduct business (including sharing information, maintaining relationships and conducting transactions) within and between organizations (Poon & Swatman, 1999). Its introduction can be seen as the catalyst for disruptive change in business organizations (Lyytinen & Rose, 2003). It has heralded some fundamental changes in the way that existing businesses operate (Hammer & Champy, 2001; Gates & Hemingway, 2000). In some industries entirely new business models have emerged (Laudon & Traver, 2008). E-business offers significant scope for reshaping supply chains (Sen & King, 2003; Shunk et al., 2007), transforming established value chains and information flows (Evans & Wurster, 2000) and facilitating co-production and innovation (Tapscott & Williams, 2008). Over the last decade, organizations of all kinds have rushed to join the online business community. By 2005 firms employing nearly 98% of British workers had some kind of online presence and e-business accounted for 14% of business turnover (E-business watch, 2005) with 40.4 million users in the UK population (Internet World Stats, 2008). It is believed that 90% of UK firms have incorporated e-business into their internal business processes, whilst 65% are using e-business to integrate their supply chains, make purchases from suppliers and sell to their customers (E-business watch, 2007).

In order to join the world of e-business, organizations have to make significant investments, not only in ICTs but also in the processes and people necessary to operate them (Quan, 2008; Clayton, 2005). Given the scale of these investments and the radical transformations that they need to make to their business processes in order to operate as an e-business, it might have been expected that there would have been a widespread concern about whether these investments have yielded the expected improvements in performance. Also, it might have been expected that a vigorous debate about the adequacy of existing performance measurement systems for the online environment would be taking place. As Straub et al. (2002, p. 117) put it, “the unique characteristics underlying the Web may in some cases require new metrics, or at least the careful evaluation of existing ones to facilitate the development of innovative solutions to emerging problems.” It is therefore surprising to find a shortage of academic literature in the field. Marr and Neely’s (2001) study of performance measurement practices in e-businesses remains a rare example of empirical research. Their study paints a picture of e-businesses measuring many different dimensions of performance. Yet, they report near universal dissatisfaction with existing measurement systems. This leads the authors to “question the appropriateness of existing performance measurement systems in today’s digital economy” (Marr and Neely, 2001, p. 214). Whilst some researchers have argued that new kinds of performance measurement are needed for e-businesses (e.g. Tonchia, 2002), there seems to be no consensus amongst practitioners as to which measures are effective for measuring e-business performance (Hinton & Barnes, 2005a).

In recent years there has been something of a revolution in performance measurement, particularly with the development of “balanced” or “multi-dimensional” performance measurement frameworks. Of these new frameworks, the Balanced Scorecard (BSC) has become pre-eminent (Kaplan & Norton, 1992). Marr and Schiuma’s (2003, p. 680) claim that the BSC is “the most influential and dominant concept in the field” is
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