

Chapter XXIV

E-Business Risk Management in Firms

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ABSTRACT

In order to understand the different types of e-business risks, this chapter uses a framework focusing on five dimensions of e-businesses. This chapter examines e-business risk management in a broader context by integrating various functions within firms. Primary consideration is given to characteristics of the integrated supply chain functionalities of a firm and their associations with information technology (IT), business models of firms, business processes that have become important to e-business, services that have been interlocked into e-business, the relative importance of partnerships, trust, and the necessity of adaptation in managing the supply chain in order to attain competitive advantage. The purpose of this chapter is to understand how to identify and manage various online risks.

INTRODUCTION

E-business has paved a path for new growth potential for many businesses around the globe. E-business is emerging as the medium of choice in trade, and is replacing traditional commerce. Some of the brick-and-mortar companies have made e-business the solution of the future. Corporations can now trade goods and services, ranging from steel to medical equipment, with potential unknown buyers and sellers using online technology. These trading hubs might be further enhanced in the future to deliver substantial value to their members, including greater liquidity, better pricing, better quality, better delivery time, efficient transactions, and better quality assurance. Why is it that the many e-businesses have not performed as expected? Despite very optimistic projections for business-to-business e-commerce, businesses

have been very cautious to embrace the technology as well as using e-business to their maximum advantage. Is this due to perceived risks inherent or associated with e-business? The perceived risks are multi-faceted and includes security and privacy (Mercuri, 2005), privacy assurance (Moore, 2005), credibility and information asymmetry (Ba & Pavlou, 2002), reliability, damage and loss of systems (Dillon & Pate-Cornell, 2005; Straub & Welke, 1998), supply chain (Spekman & Davis, 2004), decision-making processes (Pathak, 2004), poor business models (Grover & Saeed, 2004), and online services (Lange, Davis, Jaye, Erwin, Mullarney, Clarke, & Loesch, 2000; Orr, 2005). These risks have played a role in impeding the growth and acceptance of e-business.

Risk may be defined as a factor, thing, element, or course involving uncertain danger in a firm, while challenge is a test of a firm's abilities or resources in a demanding but stimulating undertaking. In this study, we focus on risks. Risk has been defined by various scholars in many ways. Cox and Rich (1964) refer to perceived risk as the overall amount of uncertainty perceived by a consumer in a particular purchase situation. Cunningham (1967) recognized the risk resulting from poor performance, danger, health hazards, and costs. Jacoby and Kaplan (1972) classified consumers' perceived risk into the following five types of risk: physical, psychological, social, financial, and performance. Murphy and Enis (1986) define perceived risk as customer's subjective assessment of the consequence of making a purchasing mistake. Ahn, Park, and Lee (2001) define perceived risk as the overall amount of uncertainty or anxiety perceived by a consumer in a particular product/service when the consumer purchases online. Using these definitions, risk is identified in the five dimensions that include technology, process, business models, services, and fulfillment in this study.

One of the critical factors playing a major role is the risk associated with online commerce in general. The purpose of this chapter is to pro-

vide an analysis of e-business risk management in a broader context that examines the integration of the functions within firms in the context of suppliers and customers at a firm level. A conceptual insight to e-business risk management will be developed with an understanding of the strategic aspects of business philosophy. Primary consideration is given to characteristics of the integrated supply chain functionalities of a firm and their associations with information technology (IT), business models of firms, the business processes that have become important to e-business, services that have been interlocked into e-business, and the relative importance of partnerships, trust, and the necessity of adaptation in managing the supply chain in order to attain competitive advantage. A review of the literature and an analysis of the characteristics and implications of the e-business risks in the context of changing global markets emphasize the importance of strategically managing the e-business initiatives of the firm. The remaining sections in this study are arranged as follows. The next section discusses how traditional businesses have transformed themselves to online businesses. The third section conceptualizes a framework of risks in e-businesses. The following sections expand each one of these risks. The final section discusses the management of risks and presents a summary of the five risk dimensions.

BACKGROUND

This section briefly describes both the traditional and online business models. The differences between these two models convey how e-business risk is really different from traditional risks. The traditional buy and sell business can be established as a process, as illustrated in Figure 1 (adapted from Vaidyanathan & Devaraj, 2003). The buyer approves a vendor using certain criteria, seller approves a customer using credit feed from credit bureaus and other selection criteria, buyer orders

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