



## **Chapter IV**

# **Website Retailing: Electronic Supply Chain Replenishment**

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### **ABSTRACT**

*Electronic commerce (EC) includes electronic data interchange (EDI) and the Internet and is used in various applications to seek improvements in effectiveness and efficiency. Supply chain management (SCM) is an application of EC, and therefore, the impact of EC can be seen throughout the supply chain (SC). This study explores the effectiveness of replenishment using the Internet (i.e., website retailing) when comparing different replenishment options, by analyzing the distributor-retail outlet and retail outlet-customer links in the SC. Moreover, this research studies customer buying habits as well as inventory management strategies when products are purchased via a website. Five hundred and fifteen products are analyzed over time (monthly) in order to identify replenishment issues when conducting business (e-business) from a website (e-tailing).*

### **INTRODUCTION**

Electronic Commerce (EC) describes “a variety of market transactions that are enabled by information technology” (Lederer et al., 1997). EC utilizing electronic markets allows new entrants to penetrate product markets, offering better and

cheaper distribution opportunities (Davidson, 1997). EC changes how industries behave (Shaw et al., 1997), dramatically shrinking the distance between suppliers and consumers (Wyckoff, 1997). EC is transforming communication, collaboration, and commerce and is enabling companies to be more customer-focused (Barsoum, 1999). Electronic data interchange (EDI) and the Internet are two modes of conducting business electronically (EC). EDI is the exchange of data/information between trading partners through the use of common standards and protocols (Murphy et al., 1998; Scala & McGrath, 1993). EDI exchanges specific sets of data with a limited number of trading partners, but the Internet allows more companies to do business electronically with more customers who are not suited for EDI (Harrington, 1998). EDI has been found to improve cooperation between trading partners and to lead to greater satisfaction and performance in business transactions (Vijayasathy & Robey, 1997). However, advances in the Internet have started to push EDI to the wayside (Vigoroso, 1999). The Internet is more than a way to exchange email and documents; it is becoming critical to EC (Venkatraman, 2000).

Supply Chain Management (SCM) is one of many applications of EC (Applegate et al., 1996; Zwass, 1996). SCM encompasses materials/supply management from the supply of basic raw materials to final product, and it focuses on how firms (that are connected and share information) utilize their suppliers' processes, technology, and capability to enhance competitive advantage. EC can lead to radical changes in SCM (Harris, 2001). In any buyer-seller relationship, the more accurately and quickly information reaches relevant sources, the faster the production and delivery of products (Evans & Wurster, 1997). Full-scale integration of EC along a SC is needed to see the true value and benefits of electronic interactions.

The electronic buying and selling of goods/services in the SC (via the Internet) is an important application of EC. An electronic SC buys and sells goods/services by electronic means. Since "the Internet changes everything," the purpose of this research is to determine the effectiveness of electronic SC replenishment using the Internet (website retailing) when comparing different replenishment options. Moreover, this research studies customer buying habits as well as inventory management strategies when products are purchased via a website. Several products will be analyzed over time (monthly) in order to explore aspects of replenishment.

## RESEARCH MODEL

A supply chain is "a system through which organizations deliver their products and services to their customers" (Poirier & Reiter, 1996). This chain is a network of interlinked organizations that have a common purpose: to achieve the best possible means of affecting that delivery. It, broadly, encompasses all logistic activities, supplier-customer partnerships, new product development and introduction, inventory management, and facilities (Stephens et al., 1997). The basic SC contains the following members: supplier, manufacturer, distributor, retail outlet, and customer.

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