PRODUCTION PRODUÇÃO

How inventory consignment programs can improve supply chain performance: a process oriented perspective

Manoj K. Malhotra[a], Alan W. Mackelprang[b*], Jayanth Jayaram[c]
[a]Case Western Reserve University, Cleveland, OH, United States
[b]Georgia Southern University, Statesboro, GA, United States
[c]University of South Carolina, Columbia, SC, United States
*amackelprang@georgiasouthern.edu

Abstract

Inventory Consignment (IC) has largely been viewed as a method of shifting the ownership and cost burden of inventory from buyer to supplier to benefit the buyer. This primarily accounting based viewpoint has largely ignored process changes that can occur for both the buyer and supplier. This study addresses this gap in the extant literature by examining IC from a process perspective by specifically addressing: (1) the implementation issues in an IC program for both buyers and suppliers and (2) the financial and operational benefits from IC for both buyers and suppliers. Using the case study methodology, we examined three firms that had varying degrees of involvement and roles in IC programs. Based on our detailed work with these three firms and their supply chain linkages, we offer a series of propositions to demonstrate that IC is not just an accounting issue, but also a management practice that requires a series of process changes in order to be successful. These process changes in turn provide operational benefits for both buyers and suppliers via the mechanism of increased demand visibility to suppliers. Through this approach, this study makes a contribution beyond what has been examined in the prior literature which has mostly dealt with IC as an accounting based inventory management issue.

Keywords

Supply chain management. Inventory management. Supplier management. Case studies. Qualitative data analysis.

How to cite this article: Malhotra, M. K., Mackelprang, A. W., & Jayaram, J. (2017). How inventory consignment programs can improve supply chain performance: a process oriented perspective. *Production*, *27*, e20170064. http://dx.doi.org/10.1590/0103-6513.006417

1. Introduction

Pressures of reducing cost, improving quality, and responsiveness created by global competition has resulted in companies seeking to squeeze inefficiencies such as slow moving inventory out of their supply chains. Thus, there has been an impetus to pursue programs and initiatives that reduce inventory costs. There are many examples of firms utilizing different types of inventory management programs to reduce costs and improve performance. For example, Dell Corporation operates a Just-in-Time (JIT) system to encourage suppliers to tighten inventory controls and ensure that demand is met on a timely basis and customers are satisfied (Kraemer et al., 2000). Additionally, firms such as Campbell Soup, M&M/Mars, Nestle, Quaker Oats, Nabisco, P&G, and Scott Paper use Continuous Replenishment (CR) with some of their customers which also result in major inventory reductions (Lee et al., 1997). The adoption of Vendor Managed Inventory (VMI) by Wal-Mart and Procter & Gamble in the 1980's prompted other leading firms from diverse industries to adopt similar practices. For example, in the high-technology sector, Texas Instruments, Motorola, HP, and Apple use VMI with some of their suppliers and, in some cases, with their customers as well (Lee et al., 1997). More recently, Novartis (Niranjan et al., 2012), GlaxoSmithKline (Danese, 2004), Boeing and Alcoa (Micheau, 2005), and Nestle and Tesco (Watson, 2005)