


Chapter 27

Effect of Information Technology on Warehousing and Inventory Management for Competitive Advantage: A Theoretical Framework

Ilyas Masudin

 <https://orcid.org/0000-0002-0153-4560>

University of Muhammadiyah Malang, Indonesia

Bangalie Sumah

University of Muhammadiyah Malang, Indonesia

Fien Zulfikarijah

University of Muhammadiyah Malang, Indonesia

Dian Palupi Restuputri

University of Muhammadiyah Malang, Indonesia

ABSTRACT

This chapter examined how the use of technology in inventory control impacts organizational performance since inventory is the most valued asset of an organization. From the summary of this study, it can be concluded that the adoption of technology as RFID in inventory management leads to improve the organizational performance in both financial and customer responsiveness. In the business performance, RFID could improve the organizational performance in terms of reducing inventory carrying costs on the warehouse, such as lowering the expiring cost of the product stocked, increasing space in a warehouse, avoiding exceed inventory, and decreasing labor costs. Moreover, from the perspective of customer service, the adoption of RFID could increase customer responsiveness in terms of reducing stock out risk, increasing the accuracy of product delivery, and increasing the interaction between customers with the organization.

DOI: 10.4018/978-1-7998-4984-1.ch027

INTRODUCTION

This study is poised to investigate how warehousing and inventory management can adequately affect a firm's competitive edge over existing and potential competitors in the market environment. Warehouse management is a strategic component for both the manufacturing and logistics process of a firm that stores goods that are either raw materials, parts, products in-process or finished products at and between points of origin and points of consumption. This facility may be created by either warehouses or distribution centers (Martens, 2008). Inventory management in the words of Kotler, Roberto et al. (2002) refers to every process involved to develop and manage the inventory levels of raw materials, semi-finished products (working-in-progress) and finished products so that enough supplies are available; and the minimum expenses of over or under stock held. It is a significant constituent for spinning the manufacturing wheels going, keep the market agile, and the distribution process intact. In short, an inventory serves as a lubricant and spring for every manufacturing and distribution network of a firm.

From the preceding, both management performs a critical role in ensuring a firm's competitive advantage. For instance, warehouse management facility performs a strategic function in facilitating supply network strategies to serve market or hold inventory to give a company means of fulfilling specific customer needs and decrease cost in a marketplace prone to lead time and disruption (Kirui, 2017). Warehouse management exists to also offer information on the specific position of inventories in a warehouse so that they can be managed on the one hand. Inventory management, on the other hand, consists of a holistic approach referring to all inventories in a specific location within the warehouse facility. Both management enhance monitoring activities such as product level, tracking of individual goods, location of goods, packaging, and shipment of customer orders, received orders to the stock inventory, and cycle counting. Therefore, warehouse management and inventory management are interwoven and that the management of one facilitates the other.

In today's supply network, holding and warehousing inventory is very significant for companies in gaining a competitive advantage. According to a logistics survey conducted in Europe, inventory cost was said to be 13% of overall logistics costs, while 24% accounted for warehousing Baker, (2007). This calls for a critical management strategy for both because they cannot be treated in isolation. There has been extensive literature calling for effective management of both disciplines. For instance, Ito & Abadi (2002), stated that a warehouse management facility takes care of fluctuation and uncertainty of demands from customers, and provides just-in-time delivery of materials. In this case, when the exchange of orders and documents smoothes effectively in a warehouse system, it contributes to a firm competitive edge. Koste & Malhotra (1999), note that efficient warehouse management can facilitate a company to reduce wastefulness so that its goods can reach consumers quickly as possible that will improve the company's competitive advantage. In short, careful warehouse management decreases the value of a product, pilferage, and excess while enhancing the accessibility of goods as and when needed, which affects the company's productivity (Ogbadu, 2009). According to Tsige (2013), inventory management is said to be adequate when a firm purchases the right order at the right time, the right amount, the right quality, and manufacture just enough goods to satisfy consumer desires without exceeding the selling price. Inventory management creates a balance within the midst of stock scarcity and stock surplus Gupta & Gupta (2012) and that managing it adequately results in speeding competitive ability and market share of a company (Chalotra, 2013). Warehousing management, therefore, is one of the significant drivers in carrying out the management of inventory. The primary competitive constructs to prudent warehousing

22 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/effect-of-information-technology-on-warehousing-and-inventory-management-for-competitive-advantage/260708

Related Content

Issues and Opportunities in E-Business Research: A Simonian Perspective

Ye-Sho Chen, Guoqing Chen and Soushan Wu (2005). *International Journal of E-Business Research* (pp. 37-53).

www.irma-international.org/article/issues-opportunities-business-research/1835

Agent-based matching of demands and supplies in business transaction formation

Raymund J. Lin and Seng-Cho T. Chou (2008). *Agent Systems in Electronic Business* (pp. 58-77).

www.irma-international.org/chapter/agent-based-matching-demands-supplies/5011

Mobility in IP Networks

Sanjay Jasola and Ramesh C. Sharma (2009). *Handbook of Research in Mobile Business, Second Edition: Technical, Methodological and Social Perspectives* (pp. 422-431).

www.irma-international.org/chapter/mobility-networks/19564

Testing, Measuring, and Diagnosing Web Sites from the User's Perspective

Leszek Borzemski (2009). *Electronic Business: Concepts, Methodologies, Tools, and Applications* (pp. 1416-1429).

www.irma-international.org/chapter/testing-measuring-diagnosing-web-sites/9357

Interoperability of XBRL Financial Statements in the U.S.

Hongwei Zhu and Harris Wu (2011). *International Journal of E-Business Research* (pp. 19-33).

www.irma-international.org/article/interoperability-xbrl-financial-statements/53839