Diminution of Impediments in Implementation of Supply Chain Management Information System for Enhancing its Effectiveness in Indian Automobile Industry

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ABSTRACT

Supply Chain Management Information System (SCMIS) has gained a lot of importance because of its ability to reduce costs and increase responsiveness in the supply chain. The implementation of SCMIS is a complicated process with significant risk. The studies have revealed that the success in implementing these systems is not very encouraging. Therefore, it is necessary to establish the impediments in SCMIS implementation and their severity. Studies on the failure factors of the ERP system have already been done by various researchers. The research on SCMIS, an inter-organizational system, is in its early stages and is still to receive that much attention as its predecessor whereas barriers for its implementation are more severe. Thus, there exists a gap in research in this important area. In this paper an attempt has been made to establish impediments, their severity and improvisation for the successful implementation of SCMIS in the Indian automobile industry.

KEYWORDS


INTRODUCTION

Information technology (IT) in supply chain management (SCM) has become a very important and critical issue for an organization due to globalization and ever increasing competition. It has been recognized by many organizations as a strategy to attain business goals (Altekar, 2005; Chan & Lee, 2005). Further, information sharing in SCM is receiving attention for achieving global competitive advantage (Khurana et al., 2011).

Today our focus is on integration of upstream and downstream partners through SCMIS. It is cross-functional, inter-enterprise system that uses information technology to support and manage the
linkages between company’s processes involved in buying, making and moving a product. It integrates supplier, manufacturer, distributor and customer logistics processes to improve manufacturing efficiency and distribution effectiveness. SCMIS is an extension of ERP as shown in Figure 1 which integrates companies beyond the boundaries of an organization and with the advent of globalization it has further gained more importance (Marwah et al., 2012).

Supply chain management systems are developed using Internets, Extranets or specified supply chain management software. Technologically, ERP is said to be the backbone of SCM. Table 1 explains the difference between ERP and SCMIS.

SCMIS not only increase the efficiencies of the internal processes but create an effective interactive medium with its suppliers upstream and its customers downstream. These systems provides high quality, relevant and timely information flow that effectively supports decision-making for inventory replenishment, capacity activation and for synchronizing material flows across all tiers within the supply chain. Thereby, it helps the firms to reduce costs, increase responsiveness, gain competitive advantage and achieve better coordination (Chopra & Miendl, 2005).

Benefits of SCMIS (Wang & Sedera, 2011) are enormous and that is why companies are willing to implement these systems, which require huge commitment of funds, time and expertise (Motwani

Figure 1. ERPII conceptual framework (Moller, 2005)  

Table 1. Comparison of SCM and ERP systems (Tarn et al., 2002)  

<table>
<thead>
<tr>
<th></th>
<th>SCM Systems</th>
<th>ERP Systems</th>
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<tr>
<td><strong>Objective</strong></td>
<td>Integrating and optimizing internal business processes of a single organization as well as the interaction of the organization with its business partners across the entire supply chain.</td>
<td>Integrating and optimizing internal business processes within the boundary of a single organization.</td>
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<td><strong>Focus</strong></td>
<td>Optimizing information flow, physical distribution flow, and cash flow over the entire supply chain.</td>
<td>Optimizing information flow and physical distribution flow within a single organization.</td>
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<tr>
<td><strong>Function</strong></td>
<td>Manufacturing management, inventory management, logistics management, and supply-chain planning.</td>
<td>Manufacturing management, financial management, and human resource management.</td>
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