Role of Electronic Customer Relationship Management in Demand Chain Management: A Predictive Analytic Approach

T. G. K. Vasista, King Saud University, Riyadh, Saudi Arabia
A. M. AlAbdullatif, King Saud University, Riyadh, Saudi Arabia

ABSTRACT

In 21st century, collaborative business supply chain environments are required to be proactive rather than reactive so that they can better deal with the uncertainty, growing competition, shorter cycle times, more demanding customers and pressure to cut costs. Demand chain management as a new business model requires investing in consumer insights and closer relationships in the supply chain to conduct predictive analysis of retail intelligent solutions. In this regard new kinds of methodologies are required to be discussed. However, at the execution level the limitations in terms of scalability, data integration and knowledge based decision support to providers or suppliers in terms of strategy building and in providing deductive inference capabilities are to be addressed. Therefore, it is required to describe how predictive analytics helps in constructing the knowledge base to conduct verification and validation in terms of semantic predictive analytic for the domain of demand chain management.

KEYWORDS
Business Intelligence, CRASP Methodology, Demand Chain Management, ECRM, Predictive Analytics, Semantic Predictive Analytics, TAMPA Methodology

INTRODUCTION

Businesses today agree that cost management is important as economy slows and sales decline. Cost management is a broad issue that cuts across all areas of the organization. The characteristics that organizations with effective strategic cost management systems considers customer-facing knowledge as one of the important elements to make the business supply chain more effective (Ellram, 2002). The costs of serving customers have been increasing and companies need to increasingly cater to micro-segments to gain competitive advantage. For this purpose, companies have to take not only the demographic and socio-economic variable into account but also the customer/consumer behavior traits that help segmentation at finer level of granulation. When companies understand customer buying behavior they can avail cost savings and increased customer loyalty (Grover, 2011).

Today’s business environment requires supply chains to be proactive rather than reactive, which demands a new model & approach that incorporates data mining predictive analytics. Today, supply chains are very complex business networks that need to be managed collaboratively and optimized globally. Additionally, global business landscape is constantly and rapidly changing. Uncertainty, growing competition, shorter cycle times, more demanding customers, and pressure to cut costs are just a few characteristics of the 21st century business environment. There is a need...
of evaluating performance management by relating application of processes, methods, metrics and technologies through ECRM (Electronic Customer Relationship Management) kind of technology enabled relationship between supply chain - strategy, planning, implementation and controls along with adopting business intelligence technique for evaluating performance management, which has been now becoming critical to measure, track and manage the supply chain processes (Stefanvic, 2014). With prescriptive analysis of retail intelligent solutions, it is possible to obtain true demand by which inventory management can be improved in terms of computing demand forecasting at real time (Cata, 2006). Electronic Customer Relationship Management is a technology based integrated strategic approach that seeks to maximize the value of customers by using the proprietary customer’s information efficiently. The knowledge about customers can support companies in two modes: (i) Reactive mode & (ii) Proactive mode. While Reactive mode of ECRM focuses on customer service directly, proactive mode of ECRM focuses on anticipating customers’ needs even prior to the customer contact whether for solving product issues or customer service issues (Cata, 2006).

Demand Chain Management (DCM) is a new business model aimed at value creation and value innovation in today’s market place, and combining the strengths of marketing and supply chain competencies. Demand chain design is based on a thorough market and customer understanding and has to be managed effectively to meet diversified needs of customers (Juttner, Christopher & Baker, 2007). Strategic value creation and value addition through innovation is possible when investing in consumer insights and closer relationships in the demand chain (Ericsson & Sundstrom, 2012). DCM creates strategic assets for the firm in terms of the overall value creation as it enables the firm to implement and integrate marketing and SCM (Supply Chain Management) strategies that can improve its overall financial and operating performance at the same time meet the long term strategic goals and enhance customer value (Madhani, 2013). DCM as a macro level process includes all activities that companies undertake in their quest to create and deliver needs based customer value propositions. From DCM perspective, information systems have to support tasks such as identifying for each order, whether an item is purchased via catalogue, call centre, direct sales force or the web site. In addition, customer information such as sales history and profitability needs to be available along with product availability for their specific requirements (Juttner, Christopher & Baker, 2007).

The competitive differentiation that can be achieved not only at the product level but also at the relationship level provides an edge to companies. The inclusive strategy that is followed in the ASCP (Abstraction-Standardization-Customization-Personalization) model is important for enterprises to focus and achieve standardization, mass-customization and personalization of products and services so as to respond well through achieving competitive advantage and differentiation (AlSudairi & Vasista, 2013a) especially through implementing Electronic Customer Relationship Management (ECRM) phenomenon. Marketing of goods and services in industries such as retailing, financial services, healthcare, automotive, steel and agribusiness is shifting from the mass marketing of standardized goods to one-to-one marketing of personalized offers. Effective CRM systems are increasingly linked to the firm’s one to one initiatives and offer the customer opportunities to customize the content of e-mails and other communications, products, services and offerings they receive (Wind & Rangaswamy, 2001). ECRM makes it feasible to combine personalized touch and customized service with mass-market efficiencies and selling to millions of customers with one-to-one communication about products, shipping schedules, special offers and other value-added information (Microstrategy, 1999). A growing number of companies use customer data for segmentation and learn to target different groups of customers with personalized services. The Rate of Return (RoR) from marketing investments can be raised with an intelligent use of customer information.

Conducting business with enterprise orientation and monitoring business performance has been becoming an issue in global business landscape, as it is constantly and rapidly changing. Therefore, the objective of this paper is to describe how predictive analytics of the business intelligence component can help reduce uncertainty by mitigating problems such as information asymmetry & mitigating bullwhip effect in collaborated supply chain management scenario as well as enable knowledge
Related Content

The Evaluation of Environmental Capital Projects: The Way Forward
www.igi-global.com/chapter/the-evaluation-of-environmental-capital-projects/196922?camid=4v1a

Physical Location
www.igi-global.com/chapter/physical-location/25555?camid=4v1a
Interoperability Issues for Systems Managing Competency Information: A Preliminary Study
www.igi-global.com/chapter/interoperability-issues-systems-managing-competency/73414?camid=4v1a