Chapter 41
SCOR Implementation in Oil and Gas Company from an Emerging Market

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ABSTRACT

Measuring supply chain performance is an important business success factor in today's competitive environment and continuous improvement culture. Several models have been developed for this purpose, however, such models lack standardized language and are not well known in the developing countries. Supply Chain Council (SCC) developed Supply Chain Operations Reference (SCOR) model. This paper presents a case-based action-research for a step-by-step implementation of SCOR model. The case company belongs to oil and gas sector in a developing country. As-Is model was developed and analyzed for gaps. Reasons were identified using company documents and semi-structured interviews. To-Be model was then developed along with recommendations keeping into account the challenges faced by companies operating in emerging markets. The step-by-step SCOR implementation was found to be effective. It is further found that adapting the SCOR model for developing countries is a time-intensive effort and adapting the best practices can be a better option.

INTRODUCTION

There are many challenges to supply chains in today's world because of multiple factors involved, such as: quality; uncertainty; agility; cost; asset safety and utilization; flexibility; reliability; responsiveness etc. This makes the management of supply chains a difficult task and managers therefore must adapt to the constant internal and external changes. Moreover, Phelps (2006) indicated another challenge that almost up to 80% expenses are in supply chains. Therefore, overcoming these challenges by managing supply chains effectively – i.e. either responsive, efficient or hybrid – is key for competitive gains, as companies with better supply chain management (SCM) has growth rate from 7-26% above industry average (Phelps, 2006). For this effective management, supply chain performance measurement is pivotal (Chae, 2009; Shepherd & Gunter, 2006). There are a number of models for gaging this performance and Supply Chain Operations Reference (SCOR) model (originally created to evaluate the ERP software market) is one of them that meets today's challenges. This paper demonstrates SCOR application in a company belonging to Oil & Gas sector. It is metrics-driven, which involves formulation of strategies in terms of quantifiable business objectives. All the performance attributes are connected by metrics (SCC, 2010).

Generally, in emerging markets, limited work has been carried out on implementation of SCOR model (Georgise, Thoben, & Seifert, 2012, 2013; Golparvar & Seifbarghy, 2009; Irfan, Xiaofei, & Chun, 2008; Salman, Iqbal, & Khalid, 2013). We found rare instances where research has been conducted to indicate whether this model is specifically viable in Pakistan's business environment, as the notion of "one size does not fit all" exists (Kureshi, 2010). In Pakistan's Oil and Gas sector, this model has not yet been implemented. Consequently, its effectiveness in identifying gaps and improvement opportunities in supply chain of aforementioned sector is yet to be discovered.

This paper discusses the implementation of SCOR model in a leading oil and gas company in Pakistan. It presents a step-by-step SCOR implementation process, for replication in similar settings, which is in line with Bolstorff and Rosenbaum (2012). The performance of the existing processes and activities was measured and presented. Reasons for gaps and low performance were identified after stakeholders' interviews and document reviews. Recommendations were further developed in the identified areas for improvement with a specific touch for emerging markets.

LITERATURE REVIEW

Today we realize that competition is between supply chains and no more between companies (Erkan & Bac, 2011). So, effective SCM is critical for protecting competitive advantage and performance improvement of a supply chain (Trkman, Štemberger, Jaklic, & Groznik, 2007). SCM is all about smooth flow and transformation of material from the origin to point of consumption. It includes flow of: materials; information; and money. Conventionally, for functional products the critical factor is cost efficiency and that for innovative products is responsiveness (Fisher, 1997).

Organizations usually consider themselves successful in managing their supply chains, however still there are gaps (Elmuti, 2002). As demand for SCM is growing among employers, more universities are adding advanced courses in SCM (Ellram & Cooper, 2014; Webb, Thomas, & Liao-Troth, 2014). This move will further enhance the body of knowledge for supply chain decision making. Conceptually, various supply chain decisions can be segregated in terms of their implications, i.e.: operational; design; and

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