ABSTRACT

Supply Chain Management (SCM) aims to improve coordination among the various members of a supply chain (manufacturers, distributors and retailers) to increase transparency and reduce the impact of demand variability. The supply chain is currently struggling with the classic symptoms of a mismatch between supply and demand, low sales forecast accuracy, high and aging inventory, as well as low customer service. Because of fluctuating demand and complex interactions among various organizations in the supply chain, the management of the supply chain becomes increasingly challenging. Variability is one of the costliest problems in supply chains, particularly when it amplifies as it flows up the chain. This phenomenon is known as the Bullwhip Effect (BWE) and has drawn much attention in the study of SCM. Anything that is done to stabilise the flow of demand across a supply chain will improve the performance and will result in substantial advantage over chains that must cope with higher levels of variability. The focus of this research was the management of demand variability through information sharing, with a specific focus on Imperial Cold Logistics. As this was an exploratory case study a variety of sources were used to gather information. As part of the study the impact of the BWE across a three-stage supply chain was quantified consisting of a single manufacturer, a single distributor and a single retailer. The results of the study demonstrate the improvement that information sharing has on service levels resulting in improved financial results to all members in the study. The benefits have been quantified for the parties in the supply chain. The study proposes several information sharing mechanisms that can be applied across supply chains.

Keywords: Bullwhip Effect, demand variability, supply chain management, information sharing