

Logistic cost optimization for domestic market operations in a snacks and candy company.

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Abstract

In recent years, the logistics component in supply chain management had become an important link with significant optimization potential in transportation, storage and the inventory management systems, all of them affecting the on time delivery indicator and also the total product cost. The present study was developed in a snacks and candy multinational company specifically on the domestic market finish product supply, analyzing the current network and shipping method in order to provide an optimal truck capacity to reduce the shipping cost and the frequency definition of shipments for the different distribution centers and direct deliveries to specific customers through the logistic network. The

methodology applied was supported by Hall's Systems Analysis, and the software GAMS CPLEX for the mathematical modeling. A significant logistics cost reduction was accomplished reducing some of the transportation wastes and increasing the use of the transportation assets without affecting the current service level and on time deliveries.

Keywords

Inventory management, Logistic network, freight transportation, Logistic cost.

Acknowledgements

The present research was founded by the Engineering division and Research department at University of Monterrey (UDEM). A special acknowledge to the company in the case study and the people of the logistics department for their valuable expertise and commitment to make this intervention a successful approach.

Biographies

Teresa Verduzco-Garza is a Researcher Professor at the Industrial and Systems Engineering School in University of Monterrey (UDEM) in Mexico. She received a BS in Industrial and Systems Engineering in 1998, an MS in Business Administration in 2005, and a MS in International Commerce in 2006 at UDEM. At the moment, she is a PhD Candidate in Management focused on logistics and supply chain operations at the Autonomous University of Nuevo León (UANL) in Mexico. Her expertise focuses on Logistics clusters for competitiveness, Operations Management, Supply Chain Operations, and Soft Systems Management. Prior industry experience includes 12 years improving enterprises performance through project management and strategic planning. She is an active member of the American Production and Inventory Control Society (APICS) and The Competitiveness Institute (TCI). She has published and presented her work at international forums like IISE World Conferences, TCI Global Conferences, SISE World Conferences and other regional conferences.