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

Teresa Verduzco-Garza  
Engineering & Technologies Division, Department of Engineering  
Universidad de Monterrey  
San Pedro Garza Garcia, NL, 66238, Mexico  
teresa.verduzco@udem.edu

Edgar Granda  
Engineering Graduate Studies Department  
Universidad de Monterrey  
San Pedro Garza Garcia, NL, 66238, Mexico  
Edgar.Granda@udem.edu

Ana Cecilia Davila  
Industrial and Systems Engineering Department  
Universidad de Monterrey  
San Pedro Garza Garcia, NL, 66238, Mexico  
Ana.davila@udem.edu

Dulce Angelica Ibarra  
Industrial and Systems Engineering Department  
Universidad de Monterrey  
San Pedro Garza Garcia, NL, 66238, Mexico  
Dulce.ibarra@udem.edu

Pamela Aimee Alanis  
Industrial and Systems Engineering Department  
Universidad de Monterrey  
San Pedro Garza Garcia, NL, 66238, Mexico  
Pamela.alanis@udem.edu

Bernardo Villarreal  
Engineering & Technologies Division, Department of Engineering  
Universidad de Monterrey  
San Pedro Garza Garcia, NL, 66238, Mexico  
Bernardo.villarreal@udem.edu

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.

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**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 though 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.