

## ABSTRACT

The role of business logistics for a company has become a major concern as the competition in the market increases every day. The company has to focus on the efficiency of the supply chain management operations by improving customer service levels and minimizing logistics cost.

This study presents the location decision in distribution network design to enable answer the questions of the company when they intend to increase capacity of facilities such as how many distribution centers should be located, where the distribution centers should be located and what size each distribution center should be. The conceptual framework of the location decision for the distribution centers is worked out through three sections.

In the first section, a current distribution network is evaluated for the performance that results in total logistics cost. In the second section, alternative distribution network models of single facility location and multiple facility locations are determined by Center-of-Gravity (COG) method. In the last section, optimal location of distribution centers is determined with lowest total logistic cost and customer service level improvement.

The implementing of this new distribution network illustrates the total logistics cost saving of almost 20.5 Million-THB per year or 5.7% compared to the baseline network and can answer the question of the company and enable them achieve the objectives in terms of cost and customer service levels.