MSQ03

Evaluating Warehouse Efficiency in a U.S. Food Distribution System: A Data Envelopment Analysis (DEA) Approach

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Abstract

This study measures the comparative efficiency of a distribution system in the food distribution service industry. We evaluate the comparative performance of a food distributor in the U.S. that consists of similarly configured 29 warehouses and identify factors that determine the efficiency in pooled analysis using monthly cost data of a food service distributor. Data envelopment analysis (DEA) was conducted on multivariate measures by using three different DEA models. By using multiple input and output measures, we identify the most efficient warehouse locations in the current distribution system. This study provides insights into how food service organizations can use DEA for internal benchmarking to improve overall operational performance.

Conference Track

Management Science and Quantitative Methods