Optimal and near-optimal inventory policies with shipping cost and planned backorders

Choosak Pornsing, author

Deskripsi Lengkap: https://lib.ui.ac.id/detail?id=20498194&lokasi=lokal

----

Abstrak

ABSTRACT
This article extends the Economic Order Quantity with backorders (EOQB) model with a mode of oversea shipping cost, namely full container load (FCL), by introducing a constraint of containers' capacity limitation to the model. Exact algorithm is proposed for straightforwardly solving a single product EOQB with shipping cost. The illustrative examples show that the proposed method yields the optimal solutions without using any complicated mathematical calculations. The model of multi-product EOQB with shipping cost is also presented. It is more complicated than the first one. We make use of the method of Lagrange multipliers to solve it systematically. The acceptable near-optimal solutions can be found; the differences ranges from 0.08-4.96% when compared to those obtained from the Excel solver. However, the second proposed method needs a skilled analyst to solve it on a spreadsheet.