### Accepted Manuscript

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PII: S0360-8352(18)30370-X

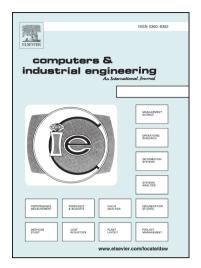
DOI: https://doi.org/10.1016/j.cie.2018.07.047

Reference: CAIE 5347

To appear in: Computers & Industrial Engineering

Received Date: 11 September 2017

Revised Date: 8 June 2018 Accepted Date: 29 July 2018



Please cite this article as: Rohaninejad, Mohammad., Sahraeian, Rashed., Tavakkoli-Moghaddam, R., An accelerated benders decomposition algorithm for reliable facility location problems in multi-echelon networks, *Computers & Industrial Engineering* (2018), doi: https://doi.org/10.1016/j.cie.2018.07.047

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### **ACCEPTED MANUSCRIPT**

# An accelerated benders decomposition algorithm for reliable facility location problems in multi-echelon networks

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# An accelerated benders decomposition algorithm for reliable facility location problems in multi-echelon networks

#### Abstract:

In this paper, we present an accelerated Benders decomposition algorithm for solving the multi-echelon reliable capacitated facility location problem (ME-RCFLP). The objective is a tradeoff between system reliability, and total investment and operational costs while the facilities can be "hardened" (Increase their capacity and decrease their probability of full and partial failure) with more cost. We allow the facilities to have different partial and full failure rates, and more than one facility may be assigned to a client (partial assignment). A new scenario-based

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