

Author's Accepted Manuscript

A joint optimal policy for a multiple-suppliers
multiple-manufacturers multiple-retailers
system

Mohsen S. Sajadieh, Mohammad Saber Fallah-
nezhad, Maryam Khosravi



www.elsevier.com/locate/ijpe

PII: S0925-5273(13)00388-5
DOI: <http://dx.doi.org/10.1016/j.ijpe.2013.09.002>
Reference: PROECO5567

To appear in: *Int. J. Production Economics*

Received date: 23 July 2013
Accepted date: 3 September 2013

Cite this article as: Mohsen S. Sajadieh, Mohammad Saber Fallahnezhad, Maryam Khosravi, A joint optimal policy for a multiple-suppliers multiple-manufacturers multiple-retailers system, *Int. J. Production Economics*, <http://dx.doi.org/10.1016/j.ijpe.2013.09.002>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

A joint optimal policy for a multiple-suppliers multiple-manufacturers multiple-retailers system

Mohsen S. Sajadieh*¹, Mohammad Saber Fallahnezhad², Maryam Khosravi³

¹*Department of Industrial Engineering & Management Systems, Amirkabir University of Technology, Tehran, Iran*

²*Department of Industrial Engineering, Yazd University, Yazd, Iran*

³*Department of Industrial Engineering, Tarbiat Modares University, Tehran, Iran*

Abstract

This paper considers an integrated production-inventory model for a three-stage supply chain involving multiple suppliers, multiple manufacturers and multiple retailers. The suppliers/manufacturers produce the raw materials/final goods at a finite rate and deliver the materials/goods in a number of batches to the manufacturers/retailers. We analyze the problem where the lead times from the manufacturers to the retailers are stochastic and shortage is allowed. We also explicitly include the transportation costs from the manufacturers to the retailers into the model. The numerical analysis shows that the coordination mechanism employed is more beneficial for the cases with less unpredictable lead times, lower shortage prices, and no transportation cost.

Keywords: Supply chain coordination; integrated production-inventory; joint economic lot sizing.

* Corresponding author: Email: sajadieh@aut.ac.ir

Tel.: +98 21 64545312; Fax: +98 21 66954569.

Address: M.S. Sajadieh, Department of Industrial Eng., Amirkabir University of Technology, Tehran, Iran

Download English Version:

<https://daneshyari.com/en/article/5080241>

Download Persian Version:

<https://daneshyari.com/article/5080241>

[Daneshyari.com](https://daneshyari.com)