Supply Chain Optimization, Design, and Management:

Advances and Intelligent Methods

loannis Minis University of the Aegean, Greece

Vasileios Zeimpekis
University of the Aegean, Greece

Georgios Dounias
University of the Aegean, Greece

Nicholas Ampazis University of the Aegean, Greece



Table of Contents 45

Prefacex
Acknowledgmentxviii
Chapter 1
Nature-Inspired Intelligence in Supply Chain Management: A Review of Selected
Methods and Applications
Vassilios Vassiliadis, University of the Aegean, Greece
Georgios Dounias, University of the Aegean, Greece
Section 1
Synthesis and Design of Supply Chain
Chapter 2
Coalitional Added Services in a Linear Neutral e-Marketplace: An Approach Based on the Shapley Value
Paolo Renna, University of Basilicata, Italy
Pierluigi Argoneto, University of Basilicata, Italy
Chapter 3
Investing in Excess Capacity: Combining Real Options and Fuzzy Approaches
in a Co-Opetitive Network
Pierluigi Argoneto, University of Basilicata, Italy
Paolo Renna, University of Basilicata, Italy
Chapter 4
Optimal Design and Operation of Supply Chain Networks under Demand Uncertainty
Michael C. Georgiadis, University of Western Macedonia, Greece
Pantelis Longinidis, University of Western Macedonia, Greece

Section 2 Planning in Large Supply Chains

Chapter 5	
A Computational Intelligence Approach to Supply Chain Demand Forecasting	110
Chapter 6	
Generating Supply Chain Ordering Policies using Quantum Inspired Genetic	
Algorithms and Grammatical Evolution	125
Seán McGarraghy, University College Dublin, Ireland	
Michael Phelan, University College Dublin, Ireland	
Chapter 7	
Quantitative Risk Management Models for Newsvendor Supply Chains	155
Dimitrios Vlachos, Aristotle University of Thessaloniki, Greece	
Chapter 8	
Relief Distribution Networks: Design and Operations	171
Soumia Ichoua, Johnson C. Smith University, USA	
Section 3	
Supply Chain Operations	
Chapter 9	-
An Analytical Model to Estimate the Optimum Production Rate of Picking	
Processes in a Modular Warehouse Environment	188
Dimitrios M. Emiris, University of Piraeus, Greece	
Athanasios Skarlatos, University of Piraeus, Greece	
Chapter 10	
Constrained Optimization of JIT Manufacturing Systems with Hybrid Genetic Algorithm	212
Alexandros Xanthopoulos, Democritus University of Thrace, Greece	
Dimitrios E. Koulouriotis, Democritus University of Thrace, Greece	
Chapter 11	
Multi-Period Routing in Hybrid Courier Operations	232
Theodore Athanasopoulos, University of the Aegean, Greece	
Ioannis Minis, University of the Aegean, Greece	

Chapter 12	
Dynamic Travel Time Estimation Techniques for Urban Freight Transportation	
Networks Using Historical and Real-Time Data	252
Vasileios Zeimpekis, University of the Aegean, Greece	
Compilation of References	274
About the Contributors	310
Index	215
Inuca	

^

.