

Contents

Part I Supplier Evaluation Under Fuzziness

Supplier Evaluation Using Fuzzy Inference Systems	3
Atefeh Amindoust and Ali Saghafinia	
Multi Criteria Supplier Selection Using Fuzzy PROMETHEE Method	21
Ozlem Senvar, Gülfem Tuzkaya and Cengiz Kahraman	
Fuzzy-AHP Approach to Improve Effectiveness of Supply Chain	35
Adesh Jinturkar, Sandip Deshmukh, Avinash Sarode, Vivek Sunapwar and Prakash Khodke	
Supplier Evaluation Using Fuzzy Clustering	61
Başar Öztayşı and Mine Işık	
Investigating Organizational Characteristics for Sustainable Supply Chain Planning Under Fuzziness	81
A. Awasthi, K. Grzybowska, M. Hussain, S. S. Chauhan and S. K. Goyal	

Part II Supply Chain Performance Measurement Under Fuzziness

Fuzzy Multiple Criteria Decision Making for Supply Chain Management	103
Yuh-Wen Chen and Moussa Larbani	
Supply Chain Performance Measurement: An Integrated DEMATEL and Fuzzy-ANP Approach	143
Ozlem Senvar, Umut Rifat Tuzkaya and Cengiz Kahraman	
Imprecise DEA Models to Assess the Agility of Supply Chains	167
Kaveh Khalili-Damghani, Soheil Sadi-Nezhad and Farhad Hosseinzadeh-Lotfi	

Supply Chain Performance Measurement Using a SCOR Based Fuzzy VIKOR Approach	199
Başar Öztayşi and Özge Sürer	
 Part III Planning, Controlling, and Improving Supply Chain Under Fuzziness	
Fuzzy Estimations and System Dynamics for Improving Manufacturing Orders in VMI Supply Chains	227
Francisco Campuzano-Bolarín, Josefa Mula and David Peidro	
Fuzzy Methods for Demand Forecasting in Supply Chain Management	243
Başar Öztayşi and Eda Bolturk	
Flows Finding in Networks in Fuzzy Conditions	269
Alexandr Bozhenyuk and Evgeniya Gerasimenko	
Supply Chain Configuration as a Cooperative Game with Fuzzy Coalitions	293
Leonid B. Sheremetov and Alexander V. Smirnov	
 Part IV Production and Materials Management Under Fuzziness	
A Decentralized Production and Distribution Planning Model in an Uncertain Environment	317
Johannes Hegeman, David Peidro, María del Mar Alemany and Manuel Díaz-Madroñero	
A Fuzzy Linear Programming Approach for Aggregate Production Planning	355
Cagatay Iris and Emre Cevikcan	
Batch Production Plan for Periodic Demands with Uncertain Recycling Rate in a Closed-Loop Supply System	375
Hsiao-Fan Wang and Chung-Yuan Fu	

Part V Optimization in Supply Chain Under Fuzziness

Optimization Models for Supply Chain Production

Planning Under Fuzziness 397
Josefa Mula, David Peidro and Raúl Poler

Recent Models and Solution Methodologies for Optimization Problems in Supply Chain Management Under Fuzziness 423
Seda Yanık Uğurlu and Ayca Altay

A Multiple Means Transportation Model with Type-2 Fuzzy Uncertainty 449
Juan Carlos Figueroa-García and Germán Hernández

Part VI Warehouse Management Under Fuzziness

A Fuzzy Set Theoretic Approach to Warehouse Storage Decisions in Supply Chains 471
Avninder Gill

Fuzzy C-Means Algorithm with Fixed Cluster Centers for Uncapacitated Facility Location Problems: Turkish Case Study 489
Şakir Esnaf, Tarık Küçükdeniz and Nükhet Tunçbilek

A Supply-Chain Production Inventory Model with Warehouse Facilities Under Fuzzy Environment 517
K. Maity

Selection and Assignment of Material Handling Devices Under Uncertainty 553
Alp Ustundag

Part VII Green and Reverse Logistics Under Fuzziness

Government Green Procurement: A Fuzzy-DEMATEL Analysis of Barriers 567
Yijie Dou, Joseph Sarkis and Chunguang Bai

Facility Location Selection in Reverse Logistics Using a Type-2 Fuzzy Decision Aid Method 591
Gül Tekin Temur, Tolga Kaya and Cengiz Kahraman

Green and Reverse Logistics Management Under Fuzziness	607
Mohammad Mousazadeh, S. Ali Torabi and Mir Saman Pishvae	
An Axiomatic Design Approach to the Classification of Reverse Logistics Network Design Studies Under Fuzziness	639
Didem Cinar, Gül Tekin Temur and Y. Ilker Topcu	
Green Supply Chain Technology: A Comprehensive Evaluation and Justification Multiattribute Decision Modeling Approach	655
Chunguang Bai and Joseph Sarkis	