

Operations and Technology Management

Volume 12

High-Performance Logistics

Methods and Technologies

Edited by

Thorsten Blecker, Wolfgang Kersten
and Matthias Meyer

With Contributions by

Hatem Aldarrat, Leticia Biescas Altelarrea, Jannis Angelis,
H. Ardiwihoho, Anand P. Assi, Tuncdan Baltacioglu, Frank Bates,
Thorsten Blecker, Sebastian Brockhaus, Vicente Budí, Sinan Can,
Eyal Eckhaus, Andrew Greasly, Jalal Hameed, Tobias Held, Tarak Housein,
Wolfgang Kersten, Matthias Klumpp, Thorsten Lammers, Doug Love,
Aristides Matopoulos, Matthias Meyer, Nils Meyer-Larsen,
Suhana Mohezar, Bernd Noche, Margherita Pero, Hans-Christian Pfohl,
Fathi Rhoma, Tommaso Rossi, Carsten Röth, Lorena Sales, Alexandra Saur,
Rakesh Singh, Claudine A. Soosay, K. Suraj, Xing Wang, Yi Wu,
Isik Ozge Yumurtaci, Stephan Zelewski, Gabriela Zitz

ERICH SCHMIDT VERLAG

Bibliographic information published by Die Deutsche Bibliothek

Die Deutsche Bibliothek lists this publication in the Deutsche Nationalbibliografie;
detailed bibliographic data are available in the Internet at <http://dnb.ddb.de>.

For further information concerning this title please follow this link:

[ESV.info/978 3 503 12048 2](http://ESV.info/978_3_503_12048_2)

ISBN 978 3 503 12048 2

ISSN 1863-3390

All rights reserved

© Erich Schmidt Verlag GmbH & Co., Berlin 2009

www.ESV.info

This paper fulfills the requirements of the
Frankfurter Forderungen of Die Deutsche Bibliothek
and the Gesellschaft für das Buch concerning the paper permanence
and meets the tight regulations of American National Standard
Ansi/Niso Z 39.48-1992 as well as ISO 9706

Printing and Binding: Hubert & Co, Göttingen

Preface

In the course of globalization, the pressure on today's logistics environment suggests a supply chain changes towards high-performance supported by innovations in process, organization and technology.

Logistics is a key enabler of supply chain collaboration, thus improving performance in this field allows supply chains to increase their efficiency significantly. In this context, an important task of performance management is to find structures and approaches that enhance logistic structures and supply chains for a better and more efficient fulfillment of customer needs.

The objective of performance management approaches is the methodical performance measurement, control and monitoring to enable continuous improvement of individual and company-wide performance.

In recent years, research has made extensive progress in the analysis of performance management in logistics. This volume provides a valuable insight into novel concepts increase supply chain performance by taking into account transport logistics and terminal operations, tackling sustainability as well as compliance issues, economic crisis and globalization problems.

Furthermore, this book deals with information technology, such as radio frequency identification, and approaches to simulate efficient supply chain networks. In practice, this provides the chance to optimize personal logistics decisions, not only based on individual performance requirements, but also meeting network-wide performance demands. In consequence, it becomes possible to adjust logistics designs and operations to the needs of the whole supply chain.

We would like to thank the authors for their excellent contributions which advance the logistics research progress. Without their support and hard work, the creation of this volume would not have been possible. Additional thanks go to the publishing company, the Erich Schmidt Verlag, especially to Dr. Joachim Schmidt for the opportunity to publish this volume and his valuable cooperation. This book would not exist without good organization and preparation. Thus, we would like to thank Thomas Will, Johanna Henke and Thorsten Lammers for their efforts to prepare, structure, and finish this book.

Hamburg, August 2009

Prof. Dr. Thorsten Blecker, Prof. Dr. Wolfgang Kersten
and Prof. Dr. Matthias Meyer

Table of Content

Preface.....	V
Table of Contents.....	VII
I. Performance in Transport Logistics	
Logistics by Rail: Is this the Key to More Sustainable Traffic Policies in Northern Germany?.....	3
<i>Gabriela Zitz and Aristides Matopoulos</i>	
Increasing Rail Cargo Transport Performance.....	17
<i>Matthias Klumpp, Stephan Zelewski and Alexandra Saur</i>	
The Impact of the Implementation of the EC Regulation No 561/2006 on German Small and Medium-Sized Trucking Companies.....	31
<i>Tobias Held and Thorsten Lammers</i>	
Logistic Chain Election: Economic and Legal Reasons.....	41
<i>Vicente Budí and Lorena Sales</i>	
“Performance on the Last Mile” – An Integrated Network-Based Approach for Improved Quality in Urban Commercial Transport.....	53
<i>Hans Christian Pfohl and Carsten Röth</i>	
II. Terminal Logistics	
Integration in the Container Terminal Operating Market in the Light of Economic Downturn: Implications for the Supply Chain.....	67
<i>Wolfgang Kersten and Sebastian Brockhaus</i>	
Container Trucks (Vehicles) Simulation Model for Investigation Activities: Belawan Case Study.....	81
<i>Fathi Rhoma, Bernd Noche and H. Ardiwiwoho</i>	
III. Information Technology as a Performance Enabler	
Investigating the Performance of Food Supply Chains through IT Integration: A Proposed Model.....	97
<i>Suhana Mohezar and Claudine A. Soosay</i>	

Role of Information Technology as an Enabler in Supply Chains.....	113
<i>K. Suraj and Rakesh Singh</i>	
Procurement Strategy Optimization: E-Auction vs. Face-to-Face Negotiations.....	129
<i>Eyal Eckhaus, Frank Bates, Tuncdan Baltacioglu and Isik Ozge Yumurtaci</i>	
Information Systems and Agile and Responsive Supply Chains.....	143
<i>Yi Wu and Jannis Angelis</i>	
Collaboration and Information Sharing as Resource in the SCM.....	157
<i>Leticia Biescas Altelarrea</i>	
IV. RFID Improving Supply Chain Performance	
A Quantitative Analysis of Improving Supply Chain Performance using RFID Technology: A Hybrid Simulation Modeling Approach [Hsma].....	175
<i>Tarak Housein, Bernd Noche, Hatem Aldarrat and Jalal Hameed</i>	
Optimising Visibility and Measuring Performance in Intermodal Container Supply Chains.....	191
<i>Nils Meyer-Larsen</i>	
V. Simulation Approaches	
Modeling and Simulation Approach Tool for Periodical Solid Waste Collection Network.....	203
<i>Fathi Rhoma, Bernd Noche, Sinan Can and Xing Wang</i>	
Object-Oriented Simulation Meta-Model for supporting Supply Network Design and Management.....	217
<i>Tommaso Rossi and Margherita Pero</i>	
An Examination of the Development of LTL Hub-and-Spoke Freight Distribution Systems.....	235
<i>Anand P. Assi, Andrew Greasley and Doug Love</i>	