



THE SUPPLY CHAIN MANAGEMENT CASEBOOK

COMPREHENSIVE COVERAGE AND
BEST PRACTICES IN SCM

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Consulting Editor, BARRY RENDER, Ph.d.



The Supply Chain Management Casebook

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Chuck Munson

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To my parents, Karl and Barbara Munson

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About the Author

Chuck Munson is a tenured Full Professor of Operations Management at Washington State University. His Ph.D. and MSBA in operations management, as well as his BSBA *summa cum laude* in finance, are from Washington University in St. Louis. He also worked for three years as a financial analyst for Contel Telephone Corporation. For two years, he served as Associate Dean for Graduate Programs in Business at Washington State.

Munson serves as a senior editor for *Production and Operations Management*, and he serves on the editorial review board of four other journals. He has published more than 20 articles in multiple journals, including *Production and Operations Management*, *Decision Sciences*, *Naval Research Logistics*, *IIE Transactions*, *European Journal of Operational Research*, *Journal of the Operational Research Society*, *Annals of Operations Research*, *European Journal of Information Systems*, *Interfaces*, *Business Horizons*, and *International Journal of Procurement Management*. His major awards include being a Founding Board Member of the Washington State University President's Teaching Academy (2004); winning the WSU College of Business Outstanding Service Award (2009 and 2013), Research Award (2004), and Teaching Award (2001); and being named the WSU MBA Professor of the Year (2000 and 2008).

Preface

Objectives of the Book

Over the past three decades, supply chain management has become firmly entrenched as a vital area of emphasis for companies. Many companies have risen to the top of their respective industries by forging effective supply chain management techniques into strategic weapons. In short, supply chain management means effectively handling the relationships between one's suppliers and buyers. But in practice, the field covers a wide range of issues, including supplier selection, purchasing, risk management, logistics, distribution, pricing, demand and supply management, and channel coordination.

Case studies remain a popular and effective means to study and analyze real business decisions. This book has been designed to provide a variety of interesting supply chain challenges. Taken as a whole, the 30 cases in the book touch on many of the important supply chain issues facing modern organizations. Individually, each case provides one or more self-contained challenges for management, leaving room for the reader to ponder the next best steps. Most of the cases are primarily qualitative in nature, while more than one-third of them have been specifically designed for quantitative analysis.

One of the most attractive features of the book is the truly global team of contributors. Twenty of our cases are written by authors currently residing outside the United States, including the countries and territories of Brazil, Canada, China, Ecuador, France, Germany, Hong Kong, India, Italy, Japan, South Korea, Spain, and Taiwan. Not only are many supply chains global in the first place, but by reading through these cases we see that managers around the world face many of the same challenges as everyone else.

This book has been designed to appeal to upper-division undergraduate or MBA-level courses in supply chain management or operations management. University instructors who adopt the book will have access to an accompanying set of electronic teaching notes for the cases, including suggested solutions for the quantitative elements.

We also expect that supply chain managers and business professionals in general will find the book to be of interest. The cases are full of ideas for addressing sticky supply chain issues. And it always helps to consider how to address challenges *before* being faced with them.

Although some are lengthy, many of the cases in this book are intentionally designed to be relatively short and focused, allowing the reader to delve directly into the issues at hand. This format also facilitates a wide menu of choices for instructors to assign combinations of short and long cases that suit their needs. All the cases have been written as a basis for class discussion rather than to necessarily imply either effective or ineffective handling of an administrative situation—that is for the reader to determine.

Organization of the Book

I have divided the 30 cases among five chapters. Many of the cases could fit well in more than one chapter, but I hope that this arrangement helps readers quickly locate cases that are most appealing to them. In addition, I have provided a table at the end of this preface that identifies key characteristics of the cases so that readers can search for cases under various topics.

Chapter 1, “Comprehensive Coverage of Supply Chain Issues,” gets the book going with two cases that cover a multitude of supply chain issues. We start things off with the unique challenges of the Salvation Army in Dallas, Texas. This case provides a thorough understanding of the operations in this humanitarian supply chain. To support its charitable activities, the nonprofit organization accepts donations and sells them back to the public via thrift stores. The unusual supply process is fascinating. Case 2 provides an in-depth picture of numerous activities of one of the world’s leading food companies, Perdue Farms.

Although every supply chain issue involves an inherent form of risk, the cases in Chapter 2, “Supply Chain Risk Management,” introduce some very serious risk management challenges. Case 3 describes the unusual problem of collecting blood platelets from donors and then getting them to the hospitals and (hopefully) into patients before they expire less than one week later. The authors provide a large data

set of nearly 6,000 transactions that instructors can access via the electronic teaching notes. Case 4 provides a comprehensive picture of several risk management issues at Molson Coors. The case has numerous qualitative and quantitative elements to consider. Cases 5, 6, and 7 touch on a variety of risk management issues, with an emphasis on trying to match supply with demand at Toyota China, Cisco Systems, and the Italian fashion goods industry, respectively.

Chapter 3, “Supply Chain Analytics,” contains the cases with a significant quantitative element. Case 8 applies queuing theory to address the problem of an electronic waste recycler being charged by the city for trucks that wait at its facility. Case 9 addresses an important issue that many of our textbooks avoid—how to alter inventory decisions in a multi-echelon (warehousing) environment. Case 10 addresses the optimal level of postponement under conditions of uncertain supply and demand. Case 11 applies the factor-rating method to a supplier selection problem. Case 12 provides an aggregate planning analysis. Case 13 applies cost analysis to help choose among three distribution scenarios. Case 14 addresses a facility layout/redesign problem for a nonprofit organization in Ecuador. Finally, Case 15 explores the issue of double marginalization and how to implement effective channel pricing that will benefit all firms in the supply chain.

Chapter 4, “Short but Sweet,” contains focused cases that cover several important issues. Case 16 provides a fascinating description of an ethical issue that more and more companies face—do they purchase in a situation where they know some unfair or difficult working conditions are occurring, even though the price is cheaper? Case 17 describes the ups and downs of an Internet supply chain exchange in the booming economy of China. Cases 18–21 can be thought of as a set. These concise gems can be read in the classroom, and each can lead to some great class discussions. Star Trek fans will appreciate Case 18, as advancements in 3D printing may someday permanently change the way we approach inventory management. Case 19 focuses on Airbus and the inherent risks involved in creating a super-lean supply chain. Case 20 explores perishable inventory in the grocery industry. With similarities to Case 19 and with reference to recent disasters, Case 21 questions the once “sacrosanct” philosophy from the auto industry that any lean initiative is better—always.

We end the book with a little world tour in Chapter 5, “Unique Challenges from Around the Globe.” Case 22 describes the workings of a cooperative of (primarily) small dairy producers in Brazil. Case 23 takes us to Ricoh in Japan with a focus on the importance of establishing and maintaining appropriate management processes for effective supply chain strategy implementation. Case 24 examines the supply chain risk management challenges at a mid-sized Italian manufacturer whose supply chain manager gathers ideas from the experiences of four other companies. Cases 25–28 are centered in India, focusing on supply chain strategy, city waste disposal challenges, attempts to convert suppliers to a cloud computing platform, and challenges in the spare parts supply chain of an auto industry manufacturer, respectively. Case 29 introduces us to the issue of expanding third-party logistics globally and the advantages that can accrue from forming a partnership with a foreign third-party logistics provider. Case 30 concludes the book with a description of the effects on a multinational logistics network after a roof collapses at a plant near Rome. The case also provides a theoretical framework with which to approach the general problem of dealing with such “macro risks.”

Key Characteristics of the Cases

Case Number	Country/Region	Supply Chain Risk	Ethical and Environmental Issues	Logistics Issues	Supplier Management Issues	Quantitative Methods
1	USA	X	X	X		
2	USA			X		
3	USA	X	X	X	X	Lead Time
4	Canada	X		X	X	Hedging
5	China	X		X		Inventory
6	Japan	X		X	X	
7	Italy	X		X	X	
8	Canada		X	X		Queuing
9	USA			X	X	Inventory
10	India	X			X	Inventory
11	USA				X	Factor Rating
12	India					Aggreg Planning
13	USA			X		Cost Analysis
14	Ecuador		X	X		Layout
15	USA					Pricing
16	USA		X		X	
17	China			X	X	
18	Ubiquitous		X		X	
19	Europe	X			X	
20	Ubiquitous	X	X	X	X	
21	Ubiquitous	X			X	
22	Brazil	X	X	X	X	
23	Japan	X			X	
24	Italy	X			X	
25	India					
26	India		X	X		
27	India				X	
28	India	X		X	X	
29	USA/ Taiwan			X		
30	Europe	X		X		

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