

# 供应链管理

Managing Supply Chains

物流方法

A Logistics Approach

Eighth Edition

第 8 版

(美)

C. John Langley, Jr.

John J. Coyle

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著

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北京

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**Managing Supply Chains: A Logistics Approach, 8 ed.**

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# 出版说明

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为了适应经济全球化的发展趋势,满足国内广大读者了解、学习和借鉴国外先进的管理经验和掌握经济理论的前沿动态,清华大学出版社与国外著名出版公司合作影印出版一系列英文版经济管理方面的图书。我们所选择的图书,基本上是已再版多次、在国外深受欢迎,并被广泛采用的优秀教材,绝大部分是该领域中较具权威性的经典之作。在本书的审阅过程中,我们得到了很多专家、学者的支持、帮助和鼓励,在此表示谢意!

由于原作者所处国家的政治、经济和文化背景等与我国不同,对书中所持观点,敬请广大读者在阅读过程中注意加以分析和鉴别。

我们期望这套影印书的出版对我国经济科学的发展能有所帮助,对我国经济管理专业的教学能有所促进。

欢迎广大读者给我们提出宝贵的意见和建议,也欢迎有关的专业人士向我们推荐您所接触到的国外优秀图书。

本书应外方出版社的要求,我们在影印过程中删掉了第3章“供应链的全球视角”和第16章“供应链的战略挑战和变革”,望读者予以谅解。

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世纪之交，中国与世界的发展呈现最显著的两大趋势——以网络为代表的信息技术的突飞猛进，以及经济全球化的激烈挑战。无论是无远弗界的因特网，还是日益密切的政治、经济、文化等方面的国际合作，都标示着 21 世纪的中国是一个更加开放的中国，也面临着一个更加开放的世界。

教育，特别是管理教育总是扮演着学习与合作的先行者的角色。改革开放以来，尤其是 20 世纪 90 年代之后，为了探寻中国国情与国际上一切优秀的管理教育思想、方法和手段的完美结合，为了更好地培养高层次的“面向国际市场竞争、具备国际经营头脑”的管理者，我国的教育机构与美国、欧洲、澳洲以及亚洲一些国家和地区的大量的著名管理学院和顶尖跨国企业建立了长期密切的合作关系。以清华大学经济管理学院为例，2000 年，学院顾问委员会成立，并于 10 月举行了第一次会议，2001 年 4 月又举行了第二次会议。这个顾问委员会包括了世界上最大的一些跨国公司和几家顶尖企业的最高领导人，其阵容之大、层次之高，超过了世界上任何一所商学院。在这样高层次、多样化、重实效的管理教育国际合作中，教师和学生与国外的交流机会大幅度增加，越来越深刻地融入到全球性的教育、文化和思想观念的时代变革中，我们的管理教育工作者和经济管理学习者，更加真切地体验到这个世界正发生着深刻的变化，也更主动地探寻和把握着世界经济发展和跨国企业运作的脉搏。

我国管理教育的发展，闭关锁国、闭门造车是绝对不行的，必须同国际接轨，按照国际一流的水准来要求自己。正如朱镕基同志在清华大学经济管理学院成立十周年时所发的贺信中指出的那样：“建设有中国特色的社会主义，需要一大批掌握市场经济的一般规律，熟悉其运行规则，而又了解中国企业实情的经济管理人才。清华大学经济管理学院就要敢于借鉴、引进世界上一切优秀的经济管理学院的教学内容、方法和手段，结合中国的国情，办成世界第一流的经管学院。”作为达到世界一流的一个重要基础，朱镕基同志多次建议清华的 MBA 教育要加强英语教学。我体会，这不仅因为英语是当今世界交往中重要的语言工具，是连接中国与世界的重要桥梁和媒介，而且更是中国经济管理人才参与国际竞争，加强国际合作，实现中国企业的国际战略的基石。推动和实行英文教学并不是目的，真正的目的在于培养学生——这些未来的企业家——能够具备同国际竞争对手、合作

伙伴沟通和对抗的能力。按照这一要求,清华大学经济管理学院正在不断推动英语教学的步伐,使得英语不仅是一门需要学习的核心课程,而且渗透到各门专业课程的学习当中。

课堂讲授之外,课前课后的大量英文原版著作、案例的阅读对于提高学生的英文水平也是非常关键的。这不仅是积累相当的专业词汇的重要手段,而且是对学习者思维方式的有效训练。

我们知道,就阅读而言,学习和借鉴国外先进的管理经验和掌握经济理论动态,或是阅读翻译作品,或是阅读原著。前者属于间接阅读,后者属于直接阅读。直接阅读取决于读者的外文阅读能力,有较高外语水平的读者当然喜欢直接阅读原著,这样不仅可以避免因译者的疏忽或水平所限而造成的纰漏,同时也可以尽享原作者思想的真实表达。而对于那些有一定外语基础,但又不能完全独立阅读国外原著的读者来说,外文的阅读能力是需要加强培养和训练的,尤其是专业外语的阅读能力更是如此。如果一个人永远不接触专业外版图书,他在获得国外学术信息方面就永远会比别人差半年甚至一年的时间,他就会在无形中减弱自己的竞争能力。因此,我们认为,有一定外语基础的读者,都应该尝试一下阅读外文原版,只要努力并坚持,就一定能过了这道关,到那时就能体验到直接阅读的妙处了。

在掌握大量术语的同时,我们更看重读者在阅读英文原版著作时对于西方管理者或研究者的思维方式的学习和体会。我认为,原汁原味的世界级大师富有特色的表达方式背后,反映了思维习惯,反映了思想精髓,反映了文化特征,也反映了战略偏好。知己知彼,对于跨文化的管理思想、方法的学习,一定要熟悉这些思想、方法所孕育、成长的文化土壤,这样,有朝一日才能真正“具备国际战略头脑”。

以往,普通读者购买和阅读英文原版还有一个书价的障碍。一本外版书少则几十美元,多则上百美元,一般读者只能望书兴叹。随着全球经济合作步伐的加快,目前在出版行业有了一种新的合作出版的方式,即外文影印版,其价格几乎与国内同类图书持平。这样一来,读者可以不必再为书价发愁。清华大学出版社这些年在这方面一直以独特的优势领先于同行。早在1997年,清华大学出版社敢为人先,在国内最早推出一批优秀商学英文版教材,规模宏大,在企业界和管理教育界引起不小的轰动,更使国内莘莘学子受益良多。

为了配合清华大学经济管理学院推动英文授课的急需,也为了向全国更多的MBA试点院校和更多的经济管理学院的教师和学生提供学习上的支持,清华大学出版社再次隆重推出与世界著名出版集团合作的英文原版影印商学教科书,也使广大工商界人士、经济管理类学生享用到最新最好质优价廉的国际教材。

祝愿我国的管理教育事业在社会各界的大力支持和关心下不断发展、日进日新;祝愿我国的经济建设在不断涌现的大批高层次的面向国际市场竞争、具备国际经营头脑的管理者的勉力经营下早日中兴。

赵纯均 教授

清华大学经济管理学院



# Preface

Supply chain management and the closely related concept of logistics are necessary cornerstones of competitive strategy, increased market share, and shareholder value for most organizations. Now more than ever, students who are currently planning to pursue a career in business will benefit from a clear understanding of this field.

With this edition, we have tried to cover, as comprehensively as possible, the changes in the way business is being done. The addition of two new contributors on the author team—Brian Gibson and Robert Novack—has allowed us to offer you the most current, comprehensive thinking on supply chain management, combined with an authenticated, real-world logistics perspective.

In keeping with the dramatic changes in the field since our last edition, we have organized the 16 chapters in this edition in an entirely new way. Part I provides a framework for your understanding of supply chain management and some of its important related components. Chapter 1 is devoted to a comprehensive introduction to supply chain management. Chapter 2 presents an overview of all of the important dimensions of logistics and explains its relationship to supply chain management.

Strategic factors are the focus of Part II. Chapter 4 explores the area of supply chain relationships and the use of third-party logistics services. Chapter 5, a chapter devoted to performance measurement and financial analysis, will help you understand how to use both performance and financial metrics to gauge efficiency and effectiveness. And finally, Chapter 6 examines the role and importance of information systems in the effective management of supply chains.

Chapter 7 begins by discussing the typical imbalance between supply and demand for an organization. Finally, this chapter reviews various channels of distribution. Chapter 8 first discusses the importance of transportation to the economy, followed by a general analysis of the transportation market and the various modes of transportation. Chapter 9 offers perspective on strategizing for effective transportation planning, execution, and control. Chapter 10 offers a detailed examination of the concept of inventory decision making and management. Chapter 11 explains the role of warehousing and its relationship to supply chain management.

With Part IV, you'll be drawn into the world of supply chain planning, sourcing, and operations. Chapter 12 will give you the tools needed to analyze, design, and refine a supply chain network. Sourcing, procurement, suppliers, and vendors, including the latest electronic technologies for sourcing, are covered in Chapter 13. Chapter 14 on operations and Chapter 15 on reverse flows present entirely new material created for this edition.

Two additional full-length cases and a comprehensive glossary, as well as useful information for supply chain professionals, are provided on the accompanying Student CD.

This textbook is required for the Logistics Management module in the Certified in Transportation and Logistics (CTL) professional certification program offered by the American Society for Transportation and Logistics. For details go to <http://www.astl.org/>

## Features

1. Learning Objectives at the beginning of each chapter provide students with an overall perspective of chapter material and also serve to establish a baseline for a working knowledge of the topics that follow.
2. Supply Chain Profile boxes are the opening vignettes at the beginning of each chapter that introduce students to the chapter's topics through familiar, real-world companies, people, and events.
3. On the Line features are applied, concrete examples that provide students with hands-on managerial experience of the chapter topics.
4. Supply Chain Technology boxes help students relate technological developments to supply chain management concepts and logistics practices.
5. End-of-chapter Summaries and Study Questions reinforce material presented in each chapter.
6. Short Cases at the end of each chapter build on what students have learned. Questions that follow the cases sharpen critical thinking skills.

## Ancillaries

1. The *Instructor's Manual* includes chapter outlines, answers to end-of-chapter study questions, commentary on end-of-chapter short cases and end-of-text comprehensive cases, and teaching tips. The Instructor's Manual files can be found at the Web site [international.cengage.com](http://international.cengage.com).
2. A convenient *Test Bank* offers a variety of true/false, multiple-choice, and essay questions for each chapter. The Test Bank files can be found at the Web site [international.cengage.com](http://international.cengage.com).
3. *PowerPoint* slides cover the main chapter topics and contain graphics from the main text. The PowerPoint files can be found at the Web site [international.cengage.com](http://international.cengage.com).

## Acknowledgments

The authors are indebted to many individuals at our respective academic institutions as well as other individuals with whom we have had contact in a variety of venues. Our university students and our executive program students have provided an important sounding board for the many concepts, techniques, metrics, and strategies presented in the book. Our faculty and corporate colleagues have provided invaluable insights and appropriate criticism of our ideas. Some individuals deserve special consideration: Dr. David A. Lindsley (University of Toledo), Mr. Mark J. Basile (DuPont Corporation), Dr. Joe B. Hanna (Auburn University), Dr. Christopher W. Craighead (Auburn University), Dr. Chris Norek (Chain Connectors), Ms. Jessica Volpe (Penn State University), Mr. Tim Gross (Penn State University), Ms. Sammie Markham (Penn State University), Ms. Devin Maguire (Penn State University), and especially Ms. Jean Beierlein and Ms. Tracie Shannon (Penn State University).

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## About the Authors

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**John Langley** is professor of Supply Chain Management and director of Supply Chain Executive Programs at the Georgia Institute of Technology. Dr. Langley has been actively involved in supply chain management and business logistics for over 30 years. He is a former president of the Council of Supply Chain Management Professionals (CSCMP) and is a past recipient of the Council's Distinguished Service Award. In 2004, he was honored as one of the profession's top five logistics executives at the Richmond Events Logistics and Supply Chain Forum, and in 2007 he was recognized as recipient of the Honorary Distinguished Logistics Professional Award by the American Society of Transportation and Logistics. Dr. Langley received a B.S. degree in mathematics, an MBA degree in finance, and a Ph.D. degree in logistics management, all from Penn State University. Among his awards and recognitions, he was named Outstanding Alumnus of the Penn State Business Logistics Program. Dr. Langley's current areas of professional involvement include supply chain strategy, supply chain relationships, and outsourcing of logistics services. Dr. Langley has coauthored a number of books including *Supply Chain Management: A Logistics Perspective*. Also, he is the lead author of the *Annual Study on Third Party Logistics: Views from the Customers*. Recent publications have appeared in major academic journals in the fields of logistics and supply chain management such as the *Journal of Business Logistics*, *International Journal of Physical Distribution and Logistics Management*, *International Journal of Logistics Management*, and *Logistics Quarterly*. In addition to his university duties, Dr. Langley is a much sought after consultant and advisor to business firms and serves on the Board of Directors of UTi Worldwide, Inc., Forward Air Corporation, and Averitt Express, Inc.

**John J. Coyle** is currently Director of Corporate Relations for the Center for Supply Chain Research and Professor Emeritus of Supply Chain and Information Systems at Penn State University. He holds a bachelor's degree and master's degree from Penn State, and he earned his doctorate at Indiana University, Bloomington, Indiana, where he was a U.S. Steel Fellow. Professor Coyle has written more than 100 publications in the areas of transportation and logistics. He has presented papers on these same topics at professional meetings, including the Council of Logistics Management, the American Marketing Association, the National Academy of Sciences, the Transportation Research Forum, and the Southern Marketing Association. He is the coauthor of two best-selling textbooks, *The Management of Business Logistics* and *Transportation*. He was editor of the *Journal of Business Logistics* from 1990 to 1996. He served on the editorial review board of the *Journal of Business Logistics*, the *Supply Chain Review*, and the *International Journal of Physical Distribution and Logistics*. Dr. Coyle's current research is focused upon supply chain transformation and effectively measuring improved supply chain performance at the "C" level in an organization. A closely related topic that he is pursuing is reverse channels of distribution and their special logistical problems. In 1991,

Dr. Coyle received the Council of Logistics Management's top honor—the Distinguished Service Award. This accolade is emblematic of an individual who has made a significant contribution to the art and science of logistics. In 2003, The Philadelphia Traffic Club named him its “Person of the Year” and in 2004, he received the Eccles Medal from the International Society of Logistics and the Lions Paw Medal from Penn State. Dr. Coyle serves on the Board of three logistics companies.

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