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# 供应链管理原理 均衡方法

Principles of Supply

Chain Management A Balanced Approach

Joel D. Wisner  
G. Keong Leong 著  
Keah-Choon Tan

清华大学出版社

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北 京

Principles of Supply Chain Management: A Balanced Approach

Joel D. Wisner, G. Keong Leong, Keah-Choon Tan

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## Joel D. Wisner

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目前他参与*International Journal of Integrated Supply Management*杂志的编辑工作,同时给本科生和研究生讲授运营和供应链管理的课程。他的研究兴趣在于质量评估和供应链管理过程中的改进战略。他还为诸多学术期刊撰文。



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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。在选书的过程中,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;同时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。

清华大学出版社经管事业部

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# 总序

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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中国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。正如朱镕基总理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，朱镕基总理多次建议清华的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



To my loving wife CJ, who has always been there for me, and my wonderful kids Hayley and Blake,  
who never cease to amaze and delight me. I promise to start mowing the lawn  
and taking out the garbage more often now.

—Joel D. Wisner

To my wife, Lin Leong, and daughter, Michelle Leong, for their patience and love.

—G. Keong Leong

To my parents for their unconditional love and sacrifice for my education, and to my wife, Shaw Yun,  
daughter, Wen Hui, and son, Wen Jay, for their patience and love.

—Keah-Choon Tan

# Preface

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Welcome to *Principles of Supply Chain Management: A Balanced Approach*. The practice of supply chain management is becoming widespread in all industries around the globe today, and firms are quickly realizing the benefits provided by supply chain management. This text is unique in that it uses a novel and logical approach in its discussions of this topic from four perspectives: purchasing, operations, logistics, and the integration among supply chain participants of these three vitally important areas of the firm. This book is somewhat different than other supply chain management texts, since we present a more balanced view of the topic. Many of the texts available today concentrate primarily on just one of the three areas of purchasing, operations, or logistics.

The objective of the book is to make readers think about how supply chain management impacts all areas of the firm, and to show how managers can improve their competitive position by employing the practices we discuss throughout the text. Junior- or senior-level business students and beginning MBA students as well as practicing managers can benefit from reading and using the text.

The textbook utilizes some notable features including opening quotes and three or more boxed features for each chapter that profile companies practicing or utilizing the techniques discussed in the chapters. Additionally, there are a total of fifteen cases spread throughout the text, varying from fairly simple to complex treatments of various supply chain management topics. Some of the companies and cases are real, while others are fictional. In the Chapter 1 appendix, there is a discussion of the Beer Game, with game boards and inventory tracking sheets to allow instructors to actually play the game with their students. Within each chapter we have incorporated up-to-date and interesting examples of organizations utilizing the methods being discussed. Finally, there are quantitative as well as qualitative problems and questions, Internet exercises, and Excel problems spread throughout most of the chapters.

Part 1 is the overview and introduction of the topic of supply chain management. This chapter introduces the basic understanding and concepts of supply chain management, and should help students realize the importance of this topic. Core concepts such as the bullwhip effect, supplier relationships, forecasting and demand management, enterprise resource planning, transportation management, and customer relationship management are discussed.

Part 2 presents purchasing issues in supply chain management. This very important topic is covered in three chapters, building from an introduction to purchasing management to employing strategic concepts aimed at increasing supply chain management success. There are five cases at the end of Part 2, four of which are real cases about Deere & Company, written by professors who were invited to Deere's Moline, Illinois, facility specifically to write cases for and about Deere & Company. We hope you find these cases interesting.

Part 3 includes four chapters regarding operations issues in supply chain management. This section progresses from forecasting to aggregate planning and inventory management and then to enterprise resource planning. A final chapter on just-in-time operations and quality management discusses the importance of process management throughout the firm. At the end of Chapter 8 there are six very interesting cases that will challenge students to apply the topics and practices presented in these four chapters.

Part 4 presents distribution issues in supply chain management for services and manufacturing firms. The section starts off with a review of domestic and international transportation and then moves on to customer relationship management, location analysis, and service

## Preface

response logistics. There are two cases included at the end of this part—one is a service case, the other is a manufacturing case.

Finally, Part 5 discusses integration issues in supply chain management. While cooperation and integration are frequently referred to in the text, this section brings the entire text into focus, tying all of the parts together first by discussing integration in detail followed by performance measurement and then a view towards the future of supply chain management. Two integration-oriented cases are included at the end of Part 5.

We think we have compiled a very interesting set of supply chain management topics that will keep the reader interested and we hope you enjoy it. The disk that comes with the teacher's edition contains sample syllabi, PowerPoint slides, sample tests, answers to end-of-chapter questions and problems, and case notes for each of the 15 cases. We welcome your comments and suggestions for improvement.

## Acknowledgments

We greatly appreciate the efforts of a number of people at Thomson/South-Western. Without their feedback and guidance, this text would not have been completed. Charles E. McCormick, Jr., Senior Acquisitions Editor, got us all on the “same page” and helped us to stay motivated and on schedule. Taney Wilkins, Development Editor, dealt with all of our day-to-day problems and questions, and thus deserves a special thank-you for the very hard work she has done on this project. Larry Qualls, Marketing Manager, has been instrumental in helping to get the word out about the text. Thank you to Production Editor Tamborah Moore, and to the great people at Shepherd Inc., especially Mary Grivetti, who put the manuscript into final form.

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# About the Authors

---

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He is currently keeping busy editing the *International Journal of Integrated Supply Management* while teaching undergraduate and graduate courses in operations and supply chain management. His research interests are in quality assessment and improvement strategies along the supply chain. His articles have appeared in numerous journals including *Journal of Business Logistics*, *Journal of Operations Management*, *Journal of Supply Chain Management*, *Journal of Transportation*, *Production and Operations Management Journal*, and *Quality Management Journal*. More information about Dr. Wisner can be found at his website: [www.scsv.nevada.edu/~wisnerj](http://www.scsv.nevada.edu/~wisnerj)

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His articles appear in academic journals such as *Decision Sciences*, *Journal of Operations Management*, *Interfaces*, *Journal of Management*, *European Journal of Operational Research*, and *International Journal of Production Research*, among others. He has co-authored three books including *Operations Strategy: Focusing Competitive Excellence* and *Cases in International Management: A Focus on Emerging Markets* and received research and teaching awards, including an Educator of the Year award, from the Asian Chamber of Commerce in Las Vegas. He has been actively involved with the Decision Sciences Institute, serving as Editor of *Decision Line*, At-Large Vice President, Chair of the Innovative Education Committee, Chair of the Doctoral Student Affairs Committee, and Manufacturing Management Track chair. In addition, he served as Co-Chair of the Operations Management Doctoral Consortium and Chair of the Professional Development Workshop, Operations Management Division of the Academy of Management. Professor Leong is listed in Marquis *Who's Who in the World*, *Who's Who in America*, and *Who's Who in American Education*.

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**About the Authors**

Prior to academia, he was the hospital administrator of a specialist hospital and the account comptroller of a listed manufacturing firm. He has served as the Manufacturing Management co-track chair, and on the Doctoral Student Affairs Committee and Member Services Committee for the Decision Sciences Institute, and as the Management and Operations Research Track chair and facilitator for the 39th Mountain Plains Management Conference. In addition, he served as the Supply Chain Management column editor for APICS Performance Advantage. Dr. Tan has received numerous research awards and was voted Person of the Year by the Western Colorado chapter of the ISM in 1997/98.



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