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# 采购与供应链管理

分析、战略、计划和执行

(第5版)

## Purchasing and Supply Chain Management


Analysis, Strategy, Planning and Practice Fifth Edition

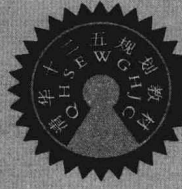
(荷兰) Arjan J. van Weele 著

Purchasing and Supply  
Chain Management

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Arjan J. van Weele

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# 出 版 说 明

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管理经验和掌握经济理论前沿动态的需要，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，基本上已是再版多次、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！

根据我国的教学实际情况，我们在影印过程中删掉了第 17 章“采购、企业社会责任和道德 (Purchasing, corporate social responsibility and ethics)”。我们在采用原书页码的同时，还按顺序编制了新的页码，望读者予以注意。

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。

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# 英/双语教学的成功路径与商科英文原版教材的效用

(代序)

在我国高校,用英语或双语教授专业课程(以下简称:英/双语教学)始于改革开放引进热潮,历经30年,虽发展不快,仍在缓慢推进。20世纪80年代,改革开放后留学归来的教育界学者们不仅引进了各学科先进的研究成果,也随之引进了西方高校的教材。以清华大学出版社为领军的国内出版社适时地引进了西方优秀教材的影印版,推动了一些高校开始在专业课程中开展英/双语教学。2007年以来,国家教育质量工程专设的“国家高校双语教学示范课程建设点”的评定项目被视为政府教育发展的政策风向标,正有力地推动着高校英/双语教学的发展。

但对英/双语教学的必要性,我国高校内部一直争议不断。争议首先围绕着中国人用英语教学的必要性。在公认英语是目前世界通用语言的前提下,英/双语教学的必要性取决于我国高校师生是否有必要及时汲取世界最新的知识和研究成果。答案是不言而喻的。况且英/双语教学省却了翻译过程,可以避免常见的信息减损和曲解问题。不过,信息发布者——教师的英语演讲能力和信息接收者——学生的英语解读能力不足又成为开展英/双语教学的障碍。因而常见的反对意见是,开展英/双语教学,课堂教学内容就会缩水,因为讲授者和听众都得花费精力和时间解译内容。如此看来,我国开展英/双语教学的高校教师必须应对挑战,洞察在我国现有条件下用英文原版教材开展英/双语教学的利和弊,并找到可行的扬长避短的路径。

在经济开放和全球化的大趋势推动下,我国中小学英语教学分量加重,英语普及程度逐年提高,高校新生的英语基础愈益扎实;教师的英语能力也随着师资的新陈代谢而日渐增强。这一趋势无疑在为英/双语教学营造越来越有利的条件。尽管如此,不同于以英语为主要语言或官方语言的一些国家,英语在我国的普及率仍较低。在青少年中,英语的普及程度和英语应用能力还仅处于初级水平;高校中能用英语演讲的教师尚属少数,且熟练程度还有待大幅提高。这样的师生英语基础,使得英/双语教学面临巨大的挑战。

同时,在多数的中国高校课堂里,教学任务多被视为逐章讲解某本教材的内容。本土中文教材通常是400~500页的32开本,含理论框架、主要知识点、计算方法和习题,但案例和故事不在其中,多由教师在讲解时添加,以演示和诠释理论要点。迄今仍然普遍盛行的“填鸭式”、“满堂灌”的传统教学法侧重于传授知识,从多数评教指标可见,只要学生感觉教师讲得精彩、有条理、能解惑,就算教学成功。

而引进的国外教材篇幅通常较长,16开大本,500~800页。习惯于上述传统教学法和评价标准的人们自然会产生一个疑问:在有限的课时内,这么厚的教材,怎么讲得完?其实,发达国家多数高校对学生阅读量的要求远远大于我国高校(即使是中文课本和资料),名校更是如此。它们的教材不仅涵盖理论框架和基本概念,而且富含长短不一、详简各异的演示性案例、故事和大量习题,总之它便于学生自学。课堂讲解只占一半课时,其余课时常被用于师生讨论和互动。于是,教师的讲解主要是勾勒理

论框架,阐释重点和难点,还需针对事先布置的阅读资料和讨论题,引导学生展开讨论。可见,大厚本的教材适合于能力培训教学法。两者相辅相成,致力于调动学生的主动性:他们必须大量阅读和思考,才能在课堂上有上好的表现,真正成为学习的主人。结果,他们的能力获得了必要和切实的磨炼。

由此可见,英/双语教学不只是教学语言的改变,它可以达到三重效用:传授专业知识;传授英语知识;同时训练专业方法和英语的应用技能。也因此,一些非英语国家的高校不惜成本,开展英/双语教学,使用与之相配的教材。对我国高校来说,要想成功开展英/双语教学,恐怕首先需要改变传统的教育思想和教学方法。换言之,如果高校想要使教育、教学接近世界先进水准,用英文原版影印教材开展英/双语教学是有效的途径。

迄今为止,原版英文教材的缺点也很明显。鉴于发达国家的作者是以其母国为背景,多数教材不涉及中国国情。教师必须在教学中紧密结合中国国情,提供相关案例、资料和思考讨论题,适时引导师生思辨现有理论的普适性,激励师生发现和创作适合我国国情的经济学、管理学、营销学规律。在我国作者编写和出版足量的优质英文教材之前,这些额外的工作必须由开展英/双语教学的教师来承担。

古今中外,成才之士都乐于阅读和探索,而这种氛围却在当今我国的大学校园里愈见淡化。加之中国学生相对薄弱的英语基础,目前英/双语教学仍面临很大的挑战:“填鸭式”的讲授与之相悖;仅靠课堂讲授和互动也很难奏效。但如能培养学生阅读和探索真理的兴趣,并营造一个全方位的孵化温床或生态环境,英/双语教学是有望成功的。根据能力培育过程的所需,这个生态环境包含师生对教育、教学的共识,好学求知的校风,富有挑战和师生互动的课堂教学,从课外讲座、项目操作到校园竞赛等第二课堂活动,便于师生交流的校园互联网等。

要做到这些,教师亟待与时俱进。随着师资的年轻化和高学历化,如今年轻教师的英语基础更好。但逆水行舟,不进则退。英语能力的进退取决于使用频率的多寡,其实英/双语教学过程既是加强英语使用、提高英语能力,也是汲取世界新知的最佳机会。不过,这一过程通常比用汉语教学的付出大得多,且因学生也需成倍地付出,英/双语教学的课程不容易像汉语教学课程那样容易在短期内获得学生的好评。因此给予英/双语教学的教师足够的激励成为生态环境的首要组成部分;缺乏对教师的足够激励,上述英/双语教学的生态环境就无法营造。

诚然,在教育体制和环境不够理想的情况下,教师和学生仍然有个人自训和奋斗的条件。英语原版教材影印版在我国的出版和更新就是对英/双语教学的及时支持。清华大学出版社近期又有一批英文原版影印教材出版,相信必将更进一步推动英/双语教学的发展。如今,已有一些本土高校的教师与英语国家的教师合著英文教材;在可见的将来,还会有中国教师编写发行到世界各地的英文教材。总之,及时用好英文原版影印教材,编写优质的英文教材是我国高校教师的历史责任。

愿英/双语教学的师资队伍愈益壮大,愿英/双语教学更加有力地推动我国教学方法与国际接轨,愿我国高校各级学生在英/双语教学中受益良多,茁壮成长!

对外经济贸易大学  
傅慧芬

# PREFACE TO THE 5TH EDITION

**I**t is almost impossible to monitor the developments which are going on in most management disciplines nowadays. This is certainly true for the area of purchasing and supply management and was the main reason to review the text of this book.

Over the past few years purchasing and supply management has met an ever increasing interest. Not only from professional purchasing managers: the interest from general managers, financial managers and business consultants is stronger than ever before. Many professionals have become aware that purchasing in general and supplier relationships in particular represent a fantastic area for improvement. Over the past few years, the number of articles on purchasing management topics has increased as has the acceptance of purchasing and supply management as a key area for improving competitive advantage.

The business chain is as strong as its weakest link. One of the important links in the business chain is the purchasing and supply function. Many top managers are becoming increasingly aware of how much money is involved in purchasing decisions. In general, only the money related to the purchase of production materials is considered. However, in practice, large sums are also spent on investment goods, and let us not forget the purchase of all kinds of services. In many industrial companies, external costs make up more than half of the costs of goods sold! In most trading companies this figure is even higher. This implies that purchasing decision-making has a large influence on the company's financial result: one dollar saved in purchasing costs contributes directly to the company's bottom line. However, the reverse is also true. A non-professional, amateur approach to purchasing decisions can readily lead to overlooking cost-savings opportunities, which in the end may lead to a significant financial loss.

In their efforts to arrive at a sustainable competitive advantage, managers increasingly differentiate between core and non-core activities. Companies try to focus on those core activities which provide them with a competitive edge in their end-use markets. Activities which have been defined as non-core are subcontracted to suppliers. As a consequence of this development, the effect of purchasing decisions on the company's financial results is growing in many sectors.

When dealing with suppliers, sub-optimization must be prevented because it is very tempting to make price the central issue in negotiations. Strategic purchasing and supply management is more than just negotiating a deal with suppliers. It is about managing supplier relationships in such a way that suppliers actively support the company's overall business strategy and value proposition. It is about fostering a climate where suppliers are challenged to continuously improve their performance and added value added. It is about integrating suppliers in the company's overall business processes to boost productivity. It is about developing the physical and information infrastructure to enable these new ways of working.

This book aims to introduce the reader to some important principles underlying purchasing and supply management. The ideas are derived from my experience as a management consultant, trainer and academic, obtained from working with a large number of companies in Europe. Regarding its structure and presentation, the underlying idea is that this book should be both balanced, easy to read and easy to teach.

The idea of writing this book dates back a number of years. The success of the original version which appeared in Dutch in 1988, together with the many positive reactions which

I received, convinced me that a translation would be worthwhile. This version, in English, based on the many reactions which I received since the book was published, appeals to a large audience. It is used at many universities and business schools as a leading textbook in many countries. Hence, I decided to make the investment and to review it carefully again. I hope you will find even more value in using it.

Those, who are familiar with the contents of this book, will soon find out that this fifth edition cannot be used next to the fourth edition. Too many topics needed to be rewritten and updated. This is true for Chapter 2, which now discusses organizational buying behaviour, purchasing process management as well as e-procurement solutions. Compared to the previous edition, Chapters 2 and 9 have now been integrated into this chapter. Chapter 3 deals with the purchasing management process and with how procurement develops as a business function over time. Compared with the previous edition, Chapter 3 and 5 have been integrated. Chapter 4 deals with facilities buying and non-product-related buying. Chapter 5 is a totally new chapter on buying of services. Chapter 6 contains a completely revised text on public procurement, providing an update reflecting the most recent changes in European procurement law. Chapter 7 includes a combination of the content of Chapters 4 and 6 of the previous edition, discussing supply markets and market structures as well as how to set up supply market research. Chapters 8 and 9 have been updated, while Chapter 10 represents a totally new chapter on developing category sourcing strategies. The next four chapters have been moderately changed. Chapter 15 has been expanded with a discussion on how to develop collaborative supplier relationships. Chapter 16 on buying for retail companies has been updated. Chapter 17 discusses the highly important topic related to socially responsible purchasing. This chapter represents a totally new text. As a result of the review process, the number of chapters has been reduced from 19 to 17, leading to a more comprehensive and up-to-date text. Throughout, introductory cases have been replaced and updated as has been done with memos and other illustrations.

For those who teach, teaching materials and background reading materials can be found on our websites [www.arjanvanweele.com](http://www.arjanvanweele.com) and [www.cengage.co.uk/vanweele5](http://www.cengage.co.uk/vanweele5).

Writing a book is like choosing from a restaurant menu in that it is often more difficult to decide what **not to** include than what should be included. In this sense the book displays several personal choices and some subjects may not have received (sufficient) attention. In due course we would appreciate to hear from you, the reader, as to whether you agree with the selection we have made.

Realization of this book has been made possible thanks to the enthusiastic support of several people, and its contents have been enriched as a result of their critical and constructive comments. Thanks to the diligence of Tom Rennie, Jennifer Seth, Oliver Jones and Dan Benton of Cengage Learning, this book can be presented to you in its present form. I am grateful to Matthew Driver and Cosmas Georgallis for the meticulous examination of the text, for the many improvements made and for the valuable suggestions concerning the layout and design. A special word of appreciation goes to Mr Jan Snijder, former vice president Purchasing and Supply of DAF Trucks and STORK and former president of NEVI (the Dutch Purchasing Management Association), who has read the text in his meticulous manner and who provided me with so many insightful corrections and additions. It is a privilege to have known him over such a long period, both as a dear colleague and as a friend. The author extends his gratitude to Dr Wendy van der Valk for the contents of Chapter 5. Most parts were derived from her PhD dissertation 'Buyer-Seller Interaction Patterns During On Going Service Exchange', Erasmus Research Institute of Management (ERIM), RSM Erasmus University, Rotterdam, 2007 (p. 323). The author acknowledges Hein van der Horst LL.M and Mary Ann Schenk LL.M, MSc of Professional Procurement Services, Counsellors for Public Procurement for having provided the text for this Chapter. Its contents is derived from their book 'Public Procurement' (Dutch text), Sdu Publishers, The Hague, second print 2008.



Moreover, I am grateful to the many practitioners whom I have met over the past years and for whom I was happy to work as a consultant and trainer. Without exception, this work gave me the feeling that purchasing and supply management is a challenging area to work in and that it represents a business area of still unknown potential for companies. Many thanks also to my students, who always prove to be a challenging and rewarding audience to work for. I also would like to thank my colleagues at both the Institute for Purchasing and Supply Development at Eindhoven University of Technology for their support, endeavour and superb working environment. Especially, I would like to thank the Dutch Association of Purchasing Management (NEVI) in The Netherlands, who for so many years have consistently supported me in my academic teaching activities and research projects.

Finally, my wife Ineke encouraged me to (re)write this book. She knew, as no other, the sacrifices which this personal project, again, would entail for my beloved family. Ineke, Vivianne and Marijn accepted these and gave me constant moral support. It is thanks to them that I found the time and the inspiration necessary to complete this task. It is undoubtedly their book too.

*Prof Dr Arjan van Weele*  
*NEVI Chair Purchasing and Supply Management*  
*Eindhoven University of Technology*  
Maarssen, The Netherlands  
September, 2009

# GUIDED TOUR

**CHAPTER 1**

## THE ROLE OF PURCHASING IN THE VALUE CHAIN

**LEARNING OBJECTIVES**

- After studying this chapter you should understand the following:
  - The role and importance of the purchasing and supply function in the value chain.
  - The difference between concepts such as ordering, buying, purchasing, procurement, sourcing, supply chain management and value chain management and how these are interrelated.
  - New developments in purchasing and supply practices of organizations.
  - The most important elements of the purchasing function.

**INTRODUCTION**

As business is becoming more and more competitive, purchasing and supply chain management are increasingly recognized by top managers as key business drivers. Again and again it appears that purchasing professionals and supply managers can contribute significantly not only to the company's bottom line, but also to its top line. Since most companies today spend more than half of their sales turnover on purchased parts and services, efficient and constructive relationships with suppliers are key to the company's short-term financial position and long-term competitive power.

Many companies cannot escape from exploiting the huge potential that purchasing and supply chain management represents to them today. The following case study on British Airways illustrates how companies can bring this potential to fruition. Given their need to improve their overall operating margin, BA's purchasing staff needed to generate significant cost savings. Several high-level cross-functional teams were set up in the company to deal with this task. Apart from price, these teams looked into possibilities on how to reduce supplier lead times, reduce inventory and increase quality levels. Next, they looked into opportunities to reduce the number of suppliers dramatically to a mere 200, leading to more business per supplier and hence increasing the value of British Airways as a customer to them. More collaborative relationships needed to be established. Given the huge number of purchasing transactions, purchase orders, delivery documents and invoices, British Airways also put as a target to reduce its transaction costs in its relationship with suppliers.

**Purchasing**  
The management of the company's external resources in such a way that the supply of all goods, services, capabilities and knowledge which are necessary for running, maintaining and managing the company's primary and support activities at several levels at the most favourable conditions.

**Learning objectives**—bullet points at the start of each chapter focus on the main ideas that need to be understood.

**CHAPTER 2 CASE STUDY**

## CASE STUDY

Suffering from heavy international competition and a growing field of small European and US-based competitors offering on-firm service and cheap fares, in October 2001, British Airways decided to review its operations. The company needed to improve its operating margin dramatically to an unprecedented 10%. To go to this margin at its existing revenue base, it determined that it would have to cut costs by \$900 million.

Headcount was targeted for more than two-thirds of the cost cut and BA created plans to cut 13,000 people or 20% of its staff including members of its purchasing operations. Another area of cost reduction focused on how BA captures customers. Rather than paying high fees to travel agents and other services to book customers on BA flights, the company designed a new pricing strategy to push traffic to a self-service Web model for booking flights.

Cutting costs alone, however, was not enough. We realized that rather than just go through a cost-cutting exercise, we needed to fundamentally rethink the business model," says Jonathan Cornwall, head of strategy and performance at BA. Standardized procurement processes were seen as one way to streamline BA's newly trimmed procurement staff of 200 to become more strategic in sourcing the airline's \$6 billion annual top, which it largely made up of fuel, seat charges, in-flight products such as catering, engineering and airport services. The purchasing operations in BA are organized into procurement director reports directly to the CFO.

BA outlined six major goals in its procurement overhaul. First, it wanted to reduce total cost by more than \$250 million. Second, it wanted to increase its share of BA's total spend to 80% of all materials and services. Next it wanted to reduce procurement transaction costs to \$15 each. Also, the company's supplier of

supplies would be reduced to 200 and key relationships would be built with existing suppliers. Re-engineering played an important role in improving BA's cost-reduction strategy. In 2001, BA used several vehicles to talk with other airlines and OEMs about procurement best practices. It used its participation in the One World Alliance to share best purchasing practices with other airlines. Nearly two years ago, BA established a strategic procurement forum for four city UK-based companies that meets quarterly to share best practices.

"We saw a big difference between the best-practice companies and our practices, especially in the absence of consistent processes," says Clavin Howell, technology and performance manager at BA. "We wanted to get people in our organization to agree on the processes because they had too many ways of doing things."

In order to foster standardization, purchasing process leaders were nominated, who would report to the procurement director and who would be responsible for ensuring BA set up best practice processes.

Currently, there are five process leaders in place to identify and implement best practices in five areas: supplier relationship, strategy and performance, supplier negotiations, transactional procurement and supply chain development.

The overhaul of the procurement department at BA is getting a lot of attention throughout the company from the executive level down and across. So far, apart from significant cost savings, 40% of UK-based purchase orders are online and the supply base has been cut to just 200, well on its way to the goal of 200.

*Adapted from: British Airways Group, British Airways Group, 'Purchasing', 8 August 2005.*

**Case studies**—these appear at the start of each chapter to demonstrate the main concepts of the chapter in a real-world situation. Longer integrative case studies now also appear at the end of each section to help consolidate learning.

**CHAPTER 2**

## INDUSTRIAL BUYING BEHAVIOUR: DECISION-MAKING IN PURCHASING

**LEARNING OBJECTIVES**

- After studying this chapter you should understand the following:
  - The major differences between organizational and consumer buying behaviour.
  - The key elements of the purchasing process.
  - The various roles in a buying decision-making unit.
  - The involvement of the purchasing department in the acquisition of various goods.
  - How to model organizational buying behaviour and network theory.

**INTRODUCTION**

The situation described above outlines one part of a complex decision-making process related to an important purchase. Decision-making processes concerning the purchase of products or services that are still to be developed, are generally characterized by a high degree of complexity and uncertainty. For this reason the decision-making in such situations usually involves many disciplines and departments in the organization. In this case study, the company it involves the management, the systems manager, the marketing department, the sales department, and the internal controlling department. In addition, the customer consultant and the suppliers involved exerted considerable influence. So, various disciplines and stakeholders are involved, with varying interests and different views and opinions about what should be done. Consequently, such decisions often make the purchasing decision-making process complex and obscure. When all structured, these processes can easily end up in frustration, considerable loss of time and budget overruns. Hence, a major question in how decision-making processes in purchasing can be structured in such a way that all parties involved arrive at solutions which are satisfactory to them.

In this chapter different models that are available to assess this question will be explained, starting with the main differences between organizational and consumer buying behaviour. Next, the purchasing process will be described in more detail. Finally, some sources from business marketing theory on how organizational buying behaviour can be modelled and analysed are described. The chapter ends with a discussion on e-procurement solutions.

**Buyer**  
A budget owner or a member of a buying unit who is authorized to negotiate and sign purchase orders at a certain level in the organization.

**Introduction**—this outlines the kinds of principles and issues you will meet in the chapter.

**CHAPTER 3**

## RISK ANALYSIS BY THE MINISTRY OF DEFENCE

looking for individual car sales prices, lease rates may be used, which reflect much better the total costs to be expected for a car during its contract period. Ranking schemes may be used with a different degree of sophistication in order to facilitate the process of evaluating the supplier bids. These schemes are employed jointly by users and buyers involved. Usually this step ends with a supplier selection proposal, which consists of (1) a decision to select a certain supplier, (2) the underlying ranking schemes and (3) the underlying operations which have been considered.

For strategic and critical suppliers, the next step is to carry out a risk analysis for critical suppliers and purchase parts. During this step potential risks related to a particular choice of supplier are investigated. An example is presented in Memo 2.1.

**MEMO 2.1 RISK ANALYSIS BY THE MINISTRY OF DEFENCE**

If a supplier does not fulfil his obligations in the realization of complex and sensitive projects, this can lead to considerable damage or loss for a military organization. To limit the risk of problems as much as possible, the Ministry of Defence of several European countries sometimes carry out an analysis of the risks related to doing business with suppliers for strategic projects. In general, these activities of risks are distinguished:

- Technical risks** regarding the suitability/professionalism of the management, the means of production, the skills, tools and testing equipment of the company in question for the manufacture of the required goods and services, which must meet the agreed requirements and must be delivered within the agreed terms.
- Financial risks** with regard to the quality management of the company in general and the quality control system of the project in question in particular.

Ultimately one supplier will be selected with whom the delivery of the product (or services) will be negotiated. In some cases the assignment may be given to two or more suppliers with a view to multiple sourcing in the preferred buying strategy. The suppliers who are not selected are informed about the reasons for rejecting their proposals.

**NEGOTIATION AND CONTRACTING**

After the supplier has been selected, a contract will have to be drawn up. Depending on the industry, the contract may refer to specific additional terms and conditions.

The technical content of the purchase agreement (usually drafted on the part of the product that is to be purchased, specific commercial and legal terms and conditions will vary per contract, differences being caused by, for example, purchasing policy, company culture, market situation or product characteristics. This limits the use of standard purchase contracts. The next section discusses several important aspects of the purchase agreement.

**Sourcing, multiple sourcing**  
Sourcing is a term in which a company uses a certain supplier more than one supplier.

**Memo**—these provide interesting insights into the key issues that are being discussed in terms of a theory/concept or practical example.

## SUMMARY

This chapter describes how organizational buying behavior can be studied and analyzed. The conclusion is that the buying behavior of organizations differs significantly from consumer buying behavior. Industrial companies, governmental organizations and institutions buy goods and services to feed, support and maintain their primary and supportive processes, while consumers purchase products to immediately satisfy their needs. The value of the models that have been developed for explaining consumer buying behavior is therefore, in the author's opinion, limited when studying industrial buying processes.

Several theoretical models in the field of industrial buying behavior were discussed. A distinction can be made between the models that view the purchasing process exclusively from an organizational perspective, and the models that regard the buying process as an interaction between two or more parties. Both types of models have their value: they explain why it is often so difficult for a customer to follow organizational purchasing processes and why they are often so hard to negotiate.

Although organizational purchasing processes may vary to a great extent, each purchasing process involves according to similar stages. In this chapter the purchasing process model has been explained. The essence of this model is that effective purchasing decision-making requires a cross-functional approach. The key issue is to direct and guide the efforts of the various organizational parties involved in such a way that an optimal result is achieved for the organization. The professional buyer can make a major contribution here. Not all phases of the purchasing process are passed through in all cases. Three types of buying situations can be distinguished: the new-task situation, the modified rebuy and the straight rebuy. The composition of the decision-making unit (DMU) will be different for each of these situations.

In this chapter the position of the purchasing department was discussed. In general, the purchasing department's involvement is highest when it concerns the purchase of routine items. Its role is more limited when it concerns investment goods. It has furthermore been demonstrated that purchasing's involvement is highest during the operational stages of the purchasing process, purchasing's involvement is relatively low in the early stages of product development (when specifications are determined and materials selected). They run ahead of purchase here.

The purchasing process model offers organizations a tool for structuring their purchasing process. Ideally, each stage of the purchasing process should result in some kind of a decision document. These documents are as follows: the purchase order specification, the supplier selection proposal, the purchasing contract, the purchase order, the delivery document, the invoice and the vendor rating. Using these documents allows for effective tracing and tracking of all aspects of the purchasing process. However, using this type of tracing and tracking requires the effort of many stakeholders in the organization. It may also lead to longer lead times. Of course an efficient purchasing administrative organization and system should be in place.

E-procurement solutions offer the purchasing professional today many opportunities to deal with most of the problems that are related to the management of purchasing processes. Electronic marketplaces provide for a fast and efficient scanning of supplier markets and supply market opportunities. Electronic auctions may facilitate a more transparent pricing mechanism among competing suppliers, resulting in considerable purchasing savings. Electronic catalogs and order-to-pay solutions will contribute to more efficient transaction processing at a lower cost, while at the same time reducing inventory holding. Whatever procurement solution the company goes for, they should match the internal operational processes and match the IT infrastructure that is present within the company.

*Industrial buying behavior? Set of internal and external variables and models that explain how organizations make buying decisions.*

different logic due to their different characteristics. Traditionally direct purchasing has received the most attention. However, this picture is rapidly changing.

Although developed some years ago, Porter's Value Chain is still a useful concept for explaining the role which the purchasing function has for many companies. Contrary to Porter's opinion, we have stressed the strategic importance of purchasing to organizations. We have explained our view by using the DuPont model. This enables the purchasing manager to demonstrate the sensitivity of his company's financial results to purchasing savings. As we have seen, the leverage effect of purchasing can be enormous, depending on its purchasing-to-value ratio and its capital turnover ratio. Purchasing and supply chain management can contribute in several ways, both in a quantitative and qualitative way, to improve the company's bottom line. It can also help to improve the company's top line.

In shaping their purchasing and supply chain strategies, companies can use different connotations and definitions related to the scope of purchasing, ranging from ordering, buying and purchasing to procurement, sourcing, supply (chain) management and value chain management. As the activity goes through each of these definitions the scope of purchasing broadens as well as its impact to the business. New challenges lying ahead will change the scope and role of purchasing within organizations. The most important ones are the need to develop leveraged purchasing and supply strategies, global sourcing, integration of suppliers in both materials and new product development processes, regional arrangements, and socially responsible purchasing. Without doubt these challenges will put purchasing and supply chain management more in the spotlight in many organizations.

*Value Chain* Composed of value activities and a margin which is achieved by these activities. Value activities can be divided into primary activities and support activities. The margin represents the value that customers want to pay extra for the company's efforts compared with the costs that were required for these.

## ASSIGNMENTS

1. Take the annual report of an industrial company. Calculate the purchasing value in relation to the turnover. Consider the effect of a 2 and 5% saving on the purchasing value.  
Do the same for a 2 and 5% increase in the purchasing value (Figure 1.4) that are affected by purchasing policy diversity or indirectly.
2. What would you consider to be purchasing's added value in a company? Mention at least three areas where purchasing can contribute. What would you consider to be purchasing's core and non-core activities?
3. What are the major differences between purchasing, procurement, sourcing and supply management? Would you consider the purchasing function to be part of supply chain management or would you favor the latter? Discuss.
4. What are the major differences between the activities of the purchasing function and the activities conducted by the purchasing department? Do you think it is important to differentiate between these two concepts? Why? The chapter describes a number of new developments in purchasing and also addresses the aim for total quality control in companies. Describe the major consequences of total quality control on the purchasing function in general and on the relationship with suppliers in particular.

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**Summary**—each chapter ends with a comprehensive summary that provides a thorough recap of the key issues in each chapter, helping you to assess your understanding and revise key content.

**Assignments**—these are provided at the end of each chapter to check understanding of the themes and issues raised in each chapter.

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**Further reading**—comprehensive references at the end of each chapter allow you to explore the subject further, and act as a starting point for projects and assignments.

# INTRODUCTION

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## PURCHASING AND SUPPLY MANAGEMENT ON THE MOVE

During the past years, purchasing and supply management as a discipline has changed considerably in many companies. This is reflected in the increased attention this discipline is receiving from business managers and practitioners. Considering the amount of money generally involved in the preparation and execution of purchasing and supply decisions, this is not a surprise. An effectively and efficiently operating purchasing and supply function can make an important contribution to company results. However, there is more. As a result of the implementation of improvement programmes in engineering, manufacturing and logistics management, many companies feel the need for improved relationships with suppliers. These relationships necessarily should result in lead-time reduction in new product development, and just-in-time delivery and zero defects on components. More than that, these relationships should result in a better value proposition to the company's customers. Traditionally, the purchasing department acts as the intermediary which negotiates the agreements and contracts with suppliers and supervises their compliance to the agreements. This traditional role, however, is changing rapidly as can be seen from the purchasing practices in some major, leading edge companies. Moving away from their traditional, operational roles, purchasing and supply managers are assuming more strategic roles in their organizations, focused on getting better performance from suppliers and active management of supplier relationships.

These are a few important reasons why management is becoming increasingly interested in purchasing and supply management as a business discipline.

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## WHY THIS BOOK?

Compared to other management disciplines, relatively little academic research has been undertaken in the area of purchasing and supply management. This explains why there is quite a gap in the development of a solid body of knowledge compared with other disciplines in business administration. As a result, it is far from simple to disseminate purchasing and supply knowledge across organizations. Most handbooks on purchasing are of American origin and date back to the 1950s. Fortunately, some new textbooks covering modern purchasing practices have become available during the last decade. Most of these, however, have been written from a truly academic background and insufficiently cover the developments which are at present taking place in the purchasing and supply practices of large, international companies. Practical descriptions of purchasing situations, which can serve as a learning vehicle and study material for students, are few. This contrasts with disciplines such as marketing, financing, organizational behaviour and other management disciplines, where many student and practitioner textbooks exist.

It is encouraging that several business schools, polytechnics and academic institutions have decided to include purchasing and supply management in their curriculum. This initiative has no chance of success, however, if there is no effective and up-to-date supportive learning and teaching material. This book aims to meet this need.

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## INTENDED AUDIENCE

This book is intended for those who are interested in purchasing and supply management in its broadest sense. Its contents aim to provide an in-depth discussion of purchasing and supply issues, both from a strategic and a managerial perspective. Reading this book will neither make you a buyer nor a purchasing manager. In this, the text differs from the more practitioner-oriented literature.

In particular, this book is intended for:

- polytechnic and academic students in business administration and industrial engineering who want to specialize in business strategy, operations management or supply chain management
- professional managers in trade and industry, active in purchasing or supply chain management, who are interested in opportunities for improving the effectiveness and efficiency of the purchasing and supply function in their companies
- executive students, who participate in management development programmes in the area of strategic management, operations management and supply chain management
- account managers and industrial sales representatives who in their professional capacity regularly meet with professional buyers, and who are interested in the way these buyers perform their tasks
- those who supervise purchasing staff directly or indirectly, and who come from a non-purchasing background and are interested in the latest developments in the area of purchasing.

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## FRAMEWORK

The book has been developed using the following principles:

- Strategic management perspective. In this book the subject of purchasing and supply management is presented as an essential link in the business system. This business system is only as strong as its weakest link. The way purchasing and supply management is executed or should be executed is presented from a strategic management perspective. This implies, for example, that attention is given to subjects such as how company objectives may influence purchasing and supply strategies and policies, how purchasing and supply strategies should support overall business strategy, how to develop these strategies, how to execute them, how to manage the purchasing process and how to monitor and manage purchasing performance.
- Practical orientation. Business administration and industrial engineering are concerned with analysing and solving practical business problems. For this reason, the various subjects are discussed from a practical point of view. This book does not aim to transform the reader into a professional buyer. The intention is to introduce the reader to the

discipline and familiarize them with the key concepts. Literature and theory are provided where we thought it needed to provide a broader perspective.

- Scientific basis. In discussing the subject matter, repeated reference is made to existing management literature. In this way the individual reader can broaden their orientation if they so desire. When possible, views on purchasing issues are illustrated with research results from national and international specialist literature. Recent literature references have been used, as well as references from a more mature age where we felt these to be still relevant for the subject.
- Identical structure of each chapter. Every chapter is alike in structure and encompasses:
  - the learning objectives
  - an introductory case to illustrate the practical relevance of the subject
  - an introduction, which provides a survey of the most important subjects which will be discussed in the chapter
  - a body text explaining the core concepts and techniques
  - practical illustrations and memos to emphasize and illustrate certain subjects in a chapter
  - a summary at the end of each chapter
  - assignments for classroom discussion, if desired.

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## STRUCTURE

The book is divided into three parts, each containing several chapters. The overall structure is presented in the figure overleaf.

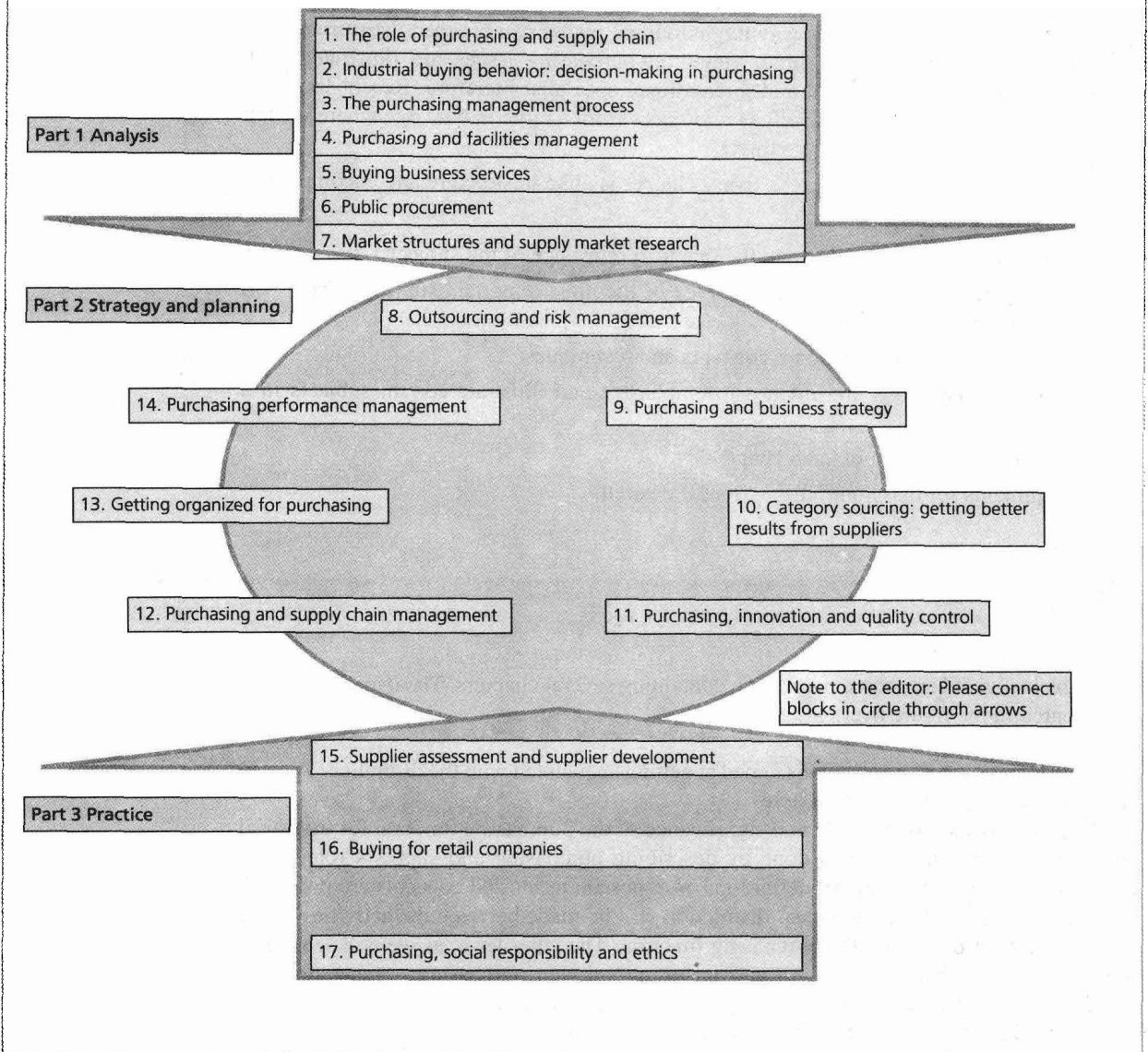
**Section One: Core Concepts** is aimed at getting acquainted with the discipline. The key concepts and terms are presented here.

Chapter 1 focuses on the role and significance of the purchasing function for industrial and service companies. This is done by describing purchasing and supply's role in the company's value chain. Further, definitions of important terms and concepts are provided. In the remainder of the book a clear distinction will be made between the activities of the purchasing department and the purchasing function. The latter term, as we will see, has a broader meaning than the first. An active, business-driven purchasing organization can make a large contribution to innovation and quality improvement. This chapter also discusses the differences between the different kinds of products and services than can be bought. In doing so, this chapter provides a framework for the rest of the book.

Chapter 2 addresses the buying behaviour of organizations. The major differences between buying behaviour of consumers and organizations are discussed. Several stages are presented that can be observed in the decision-making process regarding purchasing and supply activities. These are illustrated by presenting a purchasing process model, in which each of the steps is briefly described. Various models of organizational buying behaviour, developed in the (industrial) marketing literature, are also presented. In this way the reader will gain insight into the complexity which characterizes many purchasing decisions in organizations. A discussion on the role and importance of e-procurement solutions, including e-auctions, completes the chapter.

The core of chapter 3 is the purchasing management process. In order to be effective, management needs to give attention to each element of the purchasing management process. This starts with defining purchasing and supply goals and objectives and strategies

FIGURE 0.1 Overview and book structure



needed to realize these. Purchasing goals and objectives need to be aligned with the company goals and objectives. Purchasing strategies need to be worked out into time-phased action plans. Next, the implementation of these action plans needs to be monitored and followed up. The purchasing development model describes how purchasing and supply as a business function may develop over time. In general, six different stages of development may be identified. In this way the purchasing development model may serve as a vehicle to provide guidance for a company to professionalize procurement in the future.

Chapter 4 describes the role and position of purchasing and supply within service companies. As more companies get a better view on their non-production-related purchasing spend, they become more aware of the cost-savings potential in this area. This chapter focuses on how to professionalize purchasing in a facilities and services environment.

Chapter 5 deals with how to buy and contract for services. It will become clear what specific difficulties may arise when buying services. A classification on how to differentiate between services is provided and the implications for how to structure the purchasing process for services are discussed. Specific attention is given on how to specify for services, how to select service providers and how to contract for their services.

Chapter 6 describes the specific characteristics of public procurement, i.e. buying for governmental institutions. From this chapter it will become clear that large differences exist between buying for the government and buying for private enterprise. Governmental bodies are not free in choosing their purchasing procedures. Therefore, this chapter gives elaborate attention to the most important EC Directives on public procurement, its purchasing procedures and how to work with these.

Chapter 7 deals with the subject of markets and products. We will describe nine types of supply market structures that buyers may encounter. In doing so this part of the chapter sets the stage for our discussion on supply market research and intelligence. How to conduct purchasing market research will become clear in this chapter. Extensive attention is given to how the Internet can be used to generate purchasing market information.

**Section Two: Strategy and Planning** discusses in detail the elements of the purchasing management process, introduced in Chapter 3.

Purchasing's strategic role is discussed in Chapter 8. Outsourcing and risk assessment are the prime topics of this chapter. Attention is given to the growing trend towards outsourcing. Many companies decide nowadays to focus on what they can do best and those activities that provide them with a competitive edge in their end-user markets. Non-core activities are increasingly outsourced to specialist suppliers. This is, however, not without problems, as companies run the risk of becoming too dependent on their suppliers. This chapter deals with the issue of how outsourcing may be structured in a company, the underlying change processes that are required and how companies can reduce their risk profile *vis-à-vis* their suppliers.

Chapter 9 focuses on how to design effective purchasing strategies. Attention is given to the issue of how purchasing strategies can be linked to the overall business strategy of the company. Building on some strategic marketing concepts, a purchasing portfolio approach is presented on which four basic, differentiated supplier strategies are based. It will be explained, that in order to develop effective purchasing strategies, the company needs to understand its position in the supplier's customer portfolio.

Overall purchasing and supply strategies need to be worked out in specific category sourcing strategies and plans. This is the central topic of chapter 10. Here the question is addressed of how to assess cost-savings potential for different purchased categories and commodities. Key to the sourcing strategy is to select the right number of suppliers, to decide about the right type of relationship and to decide about the right type of contract that should be put in place.

The purchasing function has a complex network of relations in the company because it maintains relationships with nearly all departments within a company. The relationships with new product development, engineering and quality management on the one hand and supply chain management and logistics on the other are described in the next chapters. Chapter 11 presents the possible problems and opportunities in the relationships between purchasing and engineering, and purchasing and quality management. Special attention is given to how to improve supplier quality. Here, supplier quality assurance and supplier certification are presented as approaches which can be used in this respect. The chapter starts with a discussion of the relevance of open innovation for purchasing and supply management.

Chapter 12 describes the role of purchasing within supply chain management. After providing some key definitions, the basics of supply chain management are presented. This



is achieved by providing a logistics reference model, which differentiates between several manufacturing situations (ranging from assembly to order to job shop operations). This model explains why purchasing operations within different companies and industries may be vastly different. Next, it covers a detailed discussion on materials requirements planning, just-in-time management and the required information technology.

The subject of how to organize for efficient purchasing is covered in Chapter 13. In practice a large variety of organizational structures is observed and the most important of these are discussed. There is no one best way to organize for purchasing. Specific attention is given to the issue of centralized versus decentralized purchasing in a multi-plant environment. Here different co-ordination structures are discussed through which companies try to capture purchasing synergies. Next, the issue of how to organize for efficient purchasing at the business unit level is presented. Finally, different job profiles in purchasing and supply management are discussed.

Chapter 14 concludes Section Two with a discussion on purchasing performance measurement and evaluation. The central issue here is how to measure and assess the performance of the purchasing department. Several important methods and (benchmarking) techniques are presented. The relevance of the Sarbanes–Oxley act is discussed as a platform for future procurement governance.

**Section Three: Implementation** deals with some special topics in purchasing and supply and a number of operational purchasing methods and techniques. Specific attention is given to supplier costing techniques, supplier development, buying for retail companies, and purchasing, ethics and sustainability.

All purchasing decisions and decisions concerning supplier selection must be based on sound business analyses. In Chapter 15 some methods and techniques which can be used to support the decisions involved are discussed. Among other things, special attention will be given to the learning curve and cost modelling. Both techniques enable the purchasing professional to get a thorough understanding of supplier costing behaviour. Such understanding is a prerequisite for developing collaborative supplier relationships.

Chapter 16 deals with buying for retail. The most important differences with the industrial purchasing function are discussed. Some modern retail concepts such as efficient consumer response (ECR), collaborative planning, forecasting and replenishment (CPFR), vendor managed inventory (VMI) and radio frequency identification (RFID) and their implications for supplier relationships are dealt with.

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## WHAT INSTRUCTORS MATERIAL IS AVAILABLE?

Teachers and instructors, who have selected this book as the major textbook for their coursework, may use the teaching materials that are available to them through [www.cengage.com/uk/vanweele5](http://www.cengage.com/uk/vanweele5). Teaching materials consist of a teacher's manual, answers for the end of chapter discussion questions, PowerPoint presentations, literature reference lists, case studies and multiple-choice questions. This should enable them to teach their courses both in an attractive and efficient manner.