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21世纪经济管理经典原版教材

# 运营管理

(第7版)

奈杰尔·斯莱克 (Nigel Slack)  
[英] 阿利斯泰尔·布兰登·琼斯 (Alistair Brandon-Jones) \ 著  
罗伯特·约翰斯顿 (Robert Johnston)

OPERATIONS MANAGEMENT  
SEVENTH EDITION

清华大学出版社



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# Preface

## Introduction

Operations management is *important*. It is concerned with creating the services and products upon which we all depend. And all organizations produce some mixture of services and products, whether that organization is large or small, manufacturing or service, for profit or not for profit, public or private. Thankfully, most companies have now come to understand the importance of operations. This is because they have realized that effective operations management gives the potential to improve both efficiency and customer service simultaneously. But more than this, operations management is *everywhere*, it is not confined to the operations function. All managers, whether they are called Operations or Marketing or Human Resources or Finance, or whatever, manage processes and serve customers (internal or external). This makes at least part of their activities 'operations'.

Operations management is also *exciting*. It is at the centre of so many of the changes affecting the business world – changes in customer preference, changes in supply networks brought about by internet-based technologies, changes in what we want to do at work, how we want to work, where we want to work, and so on. There has rarely been a time when operations management was more topical or more at the heart of business and cultural shifts.

Operations management is also *challenging*. Promoting the creativity which will allow organizations to respond to so many changes is becoming the prime task of operations managers. It is they who must find the solutions to technological and environmental challenges, the pressures to be socially responsible, the increasing globalization of markets and the difficult-to-define areas of knowledge management.

## The aim of this book

This book provides a clear, authoritative, well-structured and interesting treatment of operations management as it applies to a variety of businesses and organizations. The text provides both a logical path through the activities of operations management and an understanding of their strategic context.

More specifically, this text is:

- *Strategic* in its perspective. It is unambiguous in treating the operations function as being central to competitiveness.
- *Conceptual* in the way it explains the reasons why operations managers need to take decisions.
- *Comprehensive* in its coverage of the significant ideas and issues which are relevant to most types of operation.
- *Practical* in that the issues and challenges of making operations management decisions *in practice* are discussed. The 'Operations in practice' feature, which starts every chapter, the short cases that appear through the chapters and the case studies at the end of each chapter all explore the approaches taken by operations managers in practice.
- *International* in the examples which are used. There are over 120 descriptions of operations practice from all over the world.
- *Balanced* in its treatment. This means we reflect the balance of economic activity between service and manufacturing operations. Around seventy-five per cent of examples are from service organizations and twenty-five per cent from manufacturing.

## Who should use this book?

Anyone who is interested in how services and products are created.

- *Undergraduates* on business studies, technical or joint degrees should find it sufficiently structured to provide an understandable route through the subject (no prior knowledge of the area is assumed).
- *MBA students* should find that its practical discussions of operations management activities enhance their own experience.
- *Postgraduate students* on other specialist masters degrees should find that it provides them with a well-grounded and, at times, critical approach to the subject.



## **Distinctive features**

### **Clear structure**

The structure of the book uses a model of operations management which distinguishes between direct, design, deliver and develop.

### **Illustrations-based**

Operations management is a practical subject and cannot be taught satisfactorily in a purely theoretical manner. Because of this, we have used examples and 'boxed' short cases which explain issues faced by real operations.

### **Worked examples**

Operations management is a subject that blends qualitative and quantitative perspectives; 'worked examples' are used to demonstrate how both types of technique can be used.

### **Critical commentaries**

Not everyone agrees about what is the best approach to the various topics and issues with operations management. This is why we have included 'critical commentaries' that pose alternative views to the one being expressed in the main flow of the text.

## **Summary answers to key questions**

Each chapter is summarized in the form of a list of bullet points. These extract the essential points which answer the key questions posed at the beginning of each chapter.

### **Case studies**

Every chapter includes a case study suitable for class discussion. The cases are usually short enough to serve as illustrations, but have sufficient content also to serve as the basis of case sessions.

### **Problems and applications**

Every chapter includes a set of problem-type exercises. These can be used to check out your understanding of the concepts illustrated in the worked examples. There are also activities that support the learning objectives of the chapter that can be done individually or in groups.

### **Selected further reading**

Every chapter ends with a short list of further reading which takes the topics covered in the chapter further, or treats some important related issues. The nature of each further reading is also explained.

### **Useful websites**

A short list of web addresses is included in each chapter for those who wish to take their studies further.

## To the Instructor . . .

### Teaching and learning resources for the 7th edition

#### New for the seventh edition

Our users have been, as usual, very generous in answering our questions as to how we can improve the book. Our research for the 7th edition resulted in maintaining the successful structure of previous editions and incorporating the following key changes:

- The topic of Corporate Social Responsibility (CSR) has been emphasized further, both in the final chapter and throughout the book.
- We have further strengthened the emphasis on the idea that 'operations management' is relevant to every functional area of the organization.
- The 'Operations in Practice' that are used to introduce the topic at the beginning of each chapter and the 'Short case' sections have been substantially refreshed.
- New ideas in operations management have been included in order to keep the text up to date with

the latest trends while retaining its emphasis on the foundations of the subject.

- Several of the cases at the end of the chapter are new (but the old ones are still available on the website), and provide an up-to-date selection of operations issues.
- The book has been visually redesigned to aid learning.

#### Instructor's resources

A completely new instructor's manual is available to lecturers adopting this textbook, together with PowerPoint presentations for each chapter and a Testbank of assessment questions. Visit [www.pearsoned.co.uk/slack](http://www.pearsoned.co.uk/slack) to access these.

Most importantly, a new set of online resources to enable students to check their understanding, practise key techniques and improve their problem-solving skills now accompanies the book. Please see below for details of MyOMLab.

## MyOMLab

### The key to greater understanding and better grades in Operations Management!

#### MyOMLab for instructors

MyOMLab is designed to save you time in preparing and delivering assignments and assessments for your course, and to enable your students to study independently and at their own pace. Using MyOMLab, you can take advantage of:

- A wide range of engaging resources, including PowerPoint slides and video.
- Hundreds of self-assessment questions, including algorithmically-generated quantitative values which generate a different problem every time.
- A Homework feature, allowing you to assign work for your students to prepare for your next class or seminar.
- A Gradebook which tracks students' performance on sample tests as well as assessments of your own design.

If you'd like to learn more or find out how MyOMLab could help you, please contact your local Pearson representative at [www.pearsoned.co.uk/relocator](http://www.pearsoned.co.uk/relocator) or visit [www.myomlab.com](http://www.myomlab.com).

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## To the Student . . .

### Making the most of this book

All academic textbooks in business management are, to some extent, simplifications of the messy reality which is actual organizational life. Any book has to separate topics, in order to study them, which in reality are closely related. For example, technology choice impacts on job design which in turn impacts on quality control; yet we have treated these topics individually. The first hint therefore in using this book effectively is to look out for all the links between the individual topics. Similarly with the sequence of topics, although the chapters follow a logical structure, they need not be studied in this order. Every chapter is, more or less, self-contained. Therefore, study the chapters in whatever sequence is appropriate to your course or your individual interests. But because each part has an introductory chapter, those students who wish to start with a brief 'overview' of the subject may wish first to study Chapters 1, 4, 10 and 18 and the chapter summaries of selected chapters. The same applies to revision – study the introductory chapters and summary answers to key questions.

The book makes full use of the many practical examples and illustrations which can be found in all operations. Many of these were provided by our contacts in companies, but many also come from journals, magazines and newspapers. So if you want to understand the importance of operations management in everyday business life, look for examples and illustrations of operations

management decisions and activities in newspapers and magazines. There are also examples which you can observe every day. Whenever you use a shop, eat a meal in a restaurant, borrow a book from the library or ride on public transport, consider the operations management issues of all the operations for which you are a customer.

The case exercises and study activities are there to provide an opportunity for you to think further about the ideas discussed in the chapters. Study activities can be used to test out your understanding of the specific points and issues discussed in the chapter and discuss them as a group, if you choose. If you cannot answer these you should revisit the relevant parts of the chapter. The case exercises at the end of each chapter will require some more thought. Use the questions at the end of each case exercise to guide you through the logic of analysing the issue treated in the case. When you have done this individually, try to discuss your analysis with other course members. Most important of all, every time you analyse one of the case exercises (or any other case or example in operations management), start off your analysis with the two fundamental questions:

- How is this organization trying to compete (or satisfy its strategic objectives if a not-for-profit organization)?
- What can the operation do to help the organization compete more effectively?

## MyOMLab

The key to greater understanding and better grades in Operations Management!

### MyOMLab for students

MyOMLab has been developed to help students make the most of their studies in operations management. Visit MyOMLab at [www.myomlab.com](http://www.myomlab.com) to find valuable teaching and learning material including:

- Self-assessment questions and a personalized Study Plan to diagnose areas of strength and weakness, direct students' learning, and improve results.
- Unlimited practice on quantitative techniques and solving problems.
- Flashcards to aid exam revision.
- Video clips and short cases to illustrate operations management in action.
- Questions that are mapped to learning objectives (rather than just to chapters).

# Ten steps to getting a better grade in operations management

We could say that the best rule for getting a better grade is to be good. We mean really, really good! But, there are plenty of us who, while fairly good, don't get as good a grade as we really deserve. So, if you are studying operations management, and you want a really good grade, try following these simple steps:

**Step 1 Practise, practise, practise.** Use the Key questions and the Problems and applications to check your understanding. Use the Study plan feature in MyOMLab and practise to master the topics which you find difficult.

**Step 2** Remember a few **key models**, and apply them wherever you can. Use the diagrams and models to describe some of the examples that are contained within the chapter. You can also use the revision pod casts on MyOMLab.

**Step 3** Remember to use both **quantitative and qualitative analysis**. You'll get more credit for appropriately mixing your methods: use a quantitative model to answer a quantitative question and vice versa, but qualify this with a few well-chosen sentences. Both the chapters of the book, and the exercises on MyOMLab, incorporate qualitative and quantitative material.

**Step 4** There's always a *strategic objective* behind any operational issue. Ask yourself, 'Would a similar operation with a different strategy do things differently?' Look at the Short cases, Case studies, and Operations in practice pieces in the book.

**Step 5 Research** widely around the topic. Use websites that you trust – we've listed some good websites at the end of each chapter and on MyOMLab. You'll get more credit for using references that come from genuine academic sources.

**Step 6** Use **your own experience**. Every day, you're experiencing an opportunity to apply the principles of operations management. Why is the queue at the airport check-in desk so long? What goes on behind the 'hole in the wall' of your bank's ATM machines? Use the videos on MyOMLab to look further at operations in practice.

**Step 7 Always answer the question.** Think 'What is really being asked here? What topic or topics does this question cover?' Find the relevant chapter or chapters, and search the Key questions at the beginning of each chapter and the Summary at the end of each chapter to get you started.

**Step 8** Take account of the three tiers of accumulating marks for your answers.

- First, demonstrate your knowledge and understanding. Make full use of the text and MyOMLab to find out where you need to improve.
- Second, show that you know how to illustrate and apply the topic. The Short cases, Case studies and 'Operations in practice' sections, combined with those on MyOMLab, give you hundreds of different examples.
- Third, show that you can discuss and analyse the issues critically. Use the Critical commentaries within the text to understand some of the alternative viewpoints.

Generally, if you can do (a) you will pass; if you can do (a) and (b) you will pass well, and if you can do all three, you will pass with flying colours!

**Step 9** Remember not only **what** the issue is about, but also **understand why!** Read the text and apply your knowledge on MyOMLab until you really understand why the concepts and techniques of operations management are important, and what they contribute to an organization's success. Your new-found knowledge will stick in your memory, allow you to develop ideas, and enable you to get better grades.

**Step 10 Start now!** Don't wait until two weeks before an assignment is due. Log on ([www.myomlab.com](http://www.myomlab.com)), read on, and GOOD LUCK!

*Nigel Slack*

*Alistair Brandon-Jones*

*Robert Johnston*



## About the authors

**Nigel Slack** is the Professor of Operations Management and Strategy at Warwick University. Previously he has been Professor of Service Engineering at Cambridge University, Professor of Manufacturing Strategy at Brunel University, a University Lecturer in Management Studies at Oxford University and Fellow in Operations Management at Templeton College, Oxford.

He worked initially as an industrial apprentice in the hand-tool industry and then as a production engineer and production manager in light engineering. He holds a Bachelor's degree in Engineering and Master's and Doctor's degrees in Management, and is a chartered engineer. He is the author of many books and papers in the operations management area, including *The Manufacturing Advantage*, published by Mercury Business Books, 1991, and *Making Management Decisions* (with Steve Cooke), 1991, published by Prentice Hall, *Service Superiority* (with Robert Johnston), published in 1993 by EUROMA and *Cases in Operations Management* (with Robert Johnston, Alan Harrison, Stuart Chambers and Christine Harland) third edition published by Financial Times Prentice Hall in 2003, *The Blackwell Encyclopedic Dictionary of Operations Management* (with Michael Lewis) published by Blackwell in 2005, *Operations Strategy* together with Michael Lewis, the third edition published by Financial Times Prentice Hall in 2011 and *Perspectives in Operations Management (Volumes I to IV)* also with Michael Lewis, published by Routledge in 2003, *Operations and Process Management*, with Alistair Brandon-Jones, Robert Johnston and Alan Betts, now in its 3rd edition, 2012. He has authored numerous academic papers and chapters in books. He also acts as a consultant to many international companies around the world in many sectors, especially financial services, transport, leisure and manufacturing. His research is in the operations and manufacturing flexibility and operations strategy areas.

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**Robert Johnston** was Professor of Operations Management at Warwick Business School and its Deputy Dean. He was the founding editor of the *International Journal of Service Industry Management* and he also served on the editorial board of the *Journal of Operations Management* and the *International Journal of Tourism and Hospitality Research*. He was the author of the market leading text, *Service Operations Management* (with Graham Clark), now in its 4th edition (2012), published by Financial Times Prentice Hall. Before moving to academia Dr Johnston held several line management and senior management posts in a number of service organizations in both the public and private sectors. As a specialist in service operations, his research interests included service design, service recovery, performance measurement and service quality. He was the author or co-author of many books, as well as chapters in other texts, numerous papers and case studies.

We very much regret that our friend and colleague Bob Johnston passed away shortly after the manuscript for this edition was completed. He will be greatly missed by all his many friends, colleagues and students.

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