

MANAGEMENT & COST ACCOUNTING

**Alnoor Bhimani • Charles T. Horngren
Srikant M. Datar • Madhav V. Rajan**

Seventh Edition

MANAGEMENT AND COST ACCOUNTING



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MANAGEMENT AND COST ACCOUNTING

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London School of Economics and Political Science

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In memory of Charles T. Horngren 1926–2011

Chuck Horngren revolutionised cost and management accounting. He loved new ideas and introduced many new concepts. He had the unique gift of explaining these concepts in simple and creative ways. He epitomised excellence and never tired of details, whether it was finding exactly the right word or working and reworking assignment materials.

He combined his great intellect with genuine humility and warmth and a human touch that inspired others to do their best. He taught us many lessons about life through his amazing discipline, his ability to make everyone feel welcome, and his love of family.

It was a great privilege, pleasure, and honour to have known Chuck Horngren. Few individuals will have the enormous influence that Chuck had on the accounting profession. Fewer still will be able to do it with the class and style that was his hallmark. He was unique, special and amazing in many, many ways and, at once, a role model, teacher, mentor and friend.

He is deeply missed.

Alnoor Bhimani

London School of Economics and Political Science

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Harvard University

Madhav V. Rajan

University of Chicago

AB: For all women who bring balance to the world

SD: Swati, Radhika, Gayatri, Sidharth

MVR: Gayathri, Sanjana, Anupama

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For password-protected online resources tailored to support the use of this textbook in teaching, please visit www.pearsoned.co.uk/bhimani



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GUIDE TO THE CASE STUDIES

Case number	Case details	Short/long	Manufacturing/service	Budgeting	Pricing	Ethical issues	Environmental issues	Activity-based costing	Behaviour/organisation factors	Cash flow	Costing system	Profit/loss measurement	ROI	Transfer pricing system	Management control system	Balanced scorecard	Performance measurement	Variance	Market assessment/competitor analysis	Tableau de bord	Strategic issues	Profitability	Country/area of origin
	PART 1																						
101	The European Savings Bank: Legal and ethical issues involved in software piracy.	short	SS			•			•														Europe
102	The ethical dilemma at Northlake: How far does the notion of 'different costs for different purposes' extend?	mid	M			•	•														•		Canada
103	Electronic Boards plc: Design of costing systems for a firm operating in a high-tech environment. Simplistic vs complex costing.	short	M	•				•	•		•						•				•		N/A
	PART II																						
201	Permaclean Products plc: Analysis of costs and price-demand information using past sales data to make decisions on product pricing.	mid	M		•						•	•										•	UK
202	The Good Night Motel: Break-even and contribution margin analysis to assess whether to accept or reject an offer.	mid	S		•							•											Canada
	PART III																						
301	Zeros plc: Use of ROI to measure divisional performance. Use of costing systems to produce meaningful profit statements.	mid	M	•	•				•		•	•	•				•					•	UK
302	Instrumental Ltd: Analysis of budgeted vs actual performance for different organisational functions. Considers strategic vs operational issues.	mid	M	•	•					•	•	•					•	•			•		UK

Case number	Case details	Short/long	Manufacturing/service	Budgeting	Pricing	Ethical issues	Environmental issues	Activity-based costing	Behaviour/organisation factors	Cash flow	Costing system	Profit/loss measurement	ROI	Transfer pricing system	Management control system	Balanced scorecard	Performance measurement	Variance	Market assessment/competitor analysis	Tableau de bord	Strategic issues	Profitability	Country/area of origin
	PART IV																						
401	BBR plc: Transfer-pricing problem where divisional interests are pitted against total corporate profitability.	mid	M	•	•	•			•		•	•		•			•	•					UK
	PART V																						
501	High-Tech Ltd: Importance of strategy and cost allocation within the IT manufacturing industry. Considers just-in-time inventory systems.	long	M & SS		•			•	•		•	•			•	•			•	•	•		UK/France
502	Tanner Pharmaceuticals and the price of a new drug: Issues of pharmaceutical drug prices in the light of competitive strategy.	mid/long			•							•									•		USA
503	Osram: Analysis of potential savings made by newer, more efficient consumables as opposed to traditionally used ones.	mid/long	M	•	•						•	•							•			•	Germany

PREFACE

Accounting influences our lives. Whether or not one uses accounting information, accounting alters our social, economic and physical environment. And of course, it impacts organisations and altering what we do and the decisions we make. Corporate action regarding new product developments, pricing strategy, staff recruitment and salary levels are usually directly influenced by accounting information. At times, accounting motivates certain types of managerial behaviours and discourages others. This book is about understanding the preparation and use of management and cost accounting information, taking account of how it influences decisions. But accounting is not a pre-given in form or process and in this sense accounting is also continuously being reshaped by its context. The book therefore also extensively discusses how different factors alter accounting techniques and processes.

As we'll see in Chapter 1, management accounting is concerned with providing managers with financial and other types of information so they can pursue diverse goals. Cost accounting, which is sometimes used interchangeably with management accounting, is more concerned with information on the acquisition and consumption of resources. We want to address issues relating to the design, use and role of accounting information in the management of organisational activities. We will do this by balancing technical detail with enterprise insight so we can focus on how to best support management action.

Management and cost accounting is a dynamic discipline which differs across firms, nations, industrial settings and management functions. It entails the application of different techniques, which must constantly adapt given the fast pace of changes facing enterprises today. Consequently, the book covers a comprehensive suite of techniques and areas including job costing and process costing, cost–volume–profit relationships, capital investment decisions, budgetary control and responsibility accounting. It looks also at quality costing, throughput issues, non-financial performance measures and strategic analysis. But we are especially concerned with the forces that impact these management accounting practices right now. So all these techniques are discussed in the context of changes witnessed by organisations on an ongoing basis. We argue that the most significant force affecting firms today is technological change and innovation. Digital technologies are rapidly impacting business models and organisational processes and they are doing so in a deep and extensive way. This new edition of the book is thus packed with coverage on how organisations are being digitally transformed and what this implies for management accountants. We look at numerous illustrations of companies using 'big data' and analytics as they draw insights from digitised data. We consider how the 'Internet of Things', robotics, artificial intelligence and other digital innovations are impacting management accounting information deployment. Aside from the digitalisation of enterprises, we consider also the relevance of sustainability concerns, enterprise governance and new business model strategies which influence how firms utilise management accounting information.

To ensure currency and coverage of modern applications of management accounting, we have introduced more than twenty new accountancy examination questions in this edition of the book. Throughout the book, we place emphasis on ensuring company-relevant examples and illustrations of management and cost accounting practices. So although general aspects of different topics and issues are extensively covered, we also discuss situational and organisational adaptations of generic techniques to ensure that you understand the applicability of management accounting approaches. To achieve this, we have added new case studies that have recently been used very successfully by business schools across the globe. We ensure that the reality of enterprise management is reflected in the book and so, rather than accord a separate chapter to

consider organisational and behavioural aspects of management accounting, we integrate this throughout chapters in the book. We further cover global themes that are of relevance to managers in modern enterprises in terms of corporate responsibility and ethical issues. Finally, we have included in this edition, many new survey and study results to illustrate actual management accounting concerns by executives from across the world.

We draw comfort in observing that other management accounting writers try to use our approach of practical examples, case studies and coverage of research findings, while also sharing our preference for the format and structure adopted here. We sharpen this in this edition by providing the very latest in corporate examples, survey findings and case studies. This ensures that you will become familiar with concepts that are of relevance and concern to organisations today.

Deciding on the sequence of chapters in a management and cost accounting textbook that spans introductory through to relatively detailed analysis of material is a challenge we have met successfully. Professors tend to have a preferred way of organising their course material. The five-part structure of this text and the sequencing of chapters have been designed to facilitate flexibility and diversity in the teaching of different topic areas and the use of the text for a range of courses and levels. An outline of the coverage and component chapters of each part is given in the part openers.

Assessment material

This book includes a high quantity and broad range of assessment material to further facilitate the use of the text on a diverse range of courses:

- **Review questions:** These short questions encourage students to review and/or critically discuss their understanding of the main topics and issues covered in each chapter, either individually or in a group.
- **Exercises:** These comprehensive questions are graded and grouped by their level of difficulty: basic, intermediate and advanced. Each question is preceded by a note of its topic coverage and an indication of the time it should take to complete. Where appropriate, the exercises include questions taken from examinations of several professional accountancy bodies. Fully worked solutions to a selection of exercises in each chapter (identified by an asterisk) are provided in Appendix A.

Case study problems

At the end of each of the five parts are problem-based illustrative cases. Each is more substantive and typically more demanding than the end-of-chapter exercises, integrating topics from several chapters in each of the core parts of the text, allowing you to apply your understanding of accounting concepts, issues and techniques within a broader organisational context, and to develop your critical thinking and analytical skills. The questions which follow the case material include some aspects suitable for group discussion/assignment.

Appendix B: Compound and interest rate tables

Students will need to use these tables in studying Chapter 13 of the text and undertaking the end-of-chapter exercises. For ease of reference, we recommend students make a photocopy of these pages.

Glossary

This comprises an alphabetical listing of all the key terms, including a concise definition, so allowing revision of all the key concepts and techniques in the text.

Academic supplements

Academics and lecturers who adopt this text are provided with a range of additional materials to assist in the preparation and delivery of courses. These include:

- complete, downloadable Instructor's Manual with teaching ideas and solutions to end-of-chapter exercises not given in the text;
- suggested teaching notes to all case study problems;
- editable PowerPoint slides and overhead projector masters, organised by chapter, allowing you to provide a lecture or seminar presentation (and/or to print handouts). These incorporate colourful graphics, outlines of chapter material, text exhibits, additional examples and graphical explanations of difficult topics;
- solutions to additional questions and spreadsheet problems.

*Alnoor Bhimani
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Madhav Rajan
March 2019*

Lecturer Resources

For password-protected online resources tailored to support the use of this textbook in teaching, please visit
www.pearsoned.co.uk/bhimani



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PART I

Management and cost accounting fundamentals

The first part of the book is intended to provide an introduction to fundamental concepts and ideas in management and cost accounting. Chapter 1 considers the role of accounting and accountants in organisations. Chapters 2–7 discuss relevant technical and broader organisational issues in the design and functioning of cost systems. Specifically, Chapter 2 provides an introduction to costing terminology and its aims. Chapters 3 and 4 discuss what might be considered ends of a continuum in costing systems: job order costing and process costing. Chapter 5 addresses fundamental cost allocation issues while Chapter 6 deals with joint-costing situations. The final chapter in this part discusses absorption costing and variable costing as two distinct approaches to stock costing.

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