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MAKING AND CONTROL

(SECOND EDITION)

JEROLD L. ZIMMERMAN



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出版者的话

但凡成事，均缘于势。得势则事成，失势则事不顺。顺势而行，如顺水行舟；借势而动，如假梯登高；造势而为，如太空揽月。治学、从政、经商、置业，均不可一日失势。势者，长处、趋势也。

今日中国，是开放的中国；当今世界，是开放的世界。改革开放，大势所趋，势不可挡。经济开放、文化开放、政治开放，世界需要一个开放的中国，中国更要融入开放的世界。借鉴国际惯例，学习他人之长，已经到了不可不为之时。

借鉴国际惯例，学习他人之长，已属老生常谈，但学什么、如何学、以何为蓝本为众多志士仁人所关注。可喜的是，由赤诚图文信息有限公司精心策划，ITP、McGraw-Hill及Simon & Schuster等国际出版公司特别授权，东北财经大学出版社荣誉出版的“世界财经与管理教材大系”现已隆重面世！她以“紧扣三个面向，精选五大系列，奉献百部名著，造就亿万英才”的博大胸襟和恢弘气势，囊括经济学、管理学、财务与会计学、市场营销学、商务与法律等财经、管理类主干学科，并根据大学教育、研究生教育、工商管理硕士（MBA）和经理人员培训项目（ETP）等不同层次的需要，相应遴选了具有针对性的教材，可谓体系完整，蔚为大观。所选图书多为哈佛、斯坦福、麻省理工、伦敦商学院、埃维商学院等世界一流名校的顶尖教授、权威学者的经典之作，在西方发达国家备受推崇，被广为采用，经久不衰，大有“洛阳纸贵”之势。

借鉴国际惯例，毕竟只是因势而动；推出国粹精品，才是造势而为。在借鉴与学习的同时，更重要的是弘扬民族精神，创建民族文化。“民族的，才是国际的”。我们提倡学他人之长，但更希望立自己之势。

势缘何物，势乃人为。识人、用人、育人、成人，乃人本之真谛。育人才、成能人，则可造大势。育人、成人之根本在教育，教育之要件在教材，教材之基础在出版。换言之，人本之基础在书本。

凡事均需讲效益，所谓成事，亦即有效。高效可造宏基，无效难以为继，此乃事物发展之规律。基于此，我们崇尚出好书、出人才、出效益！

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Preface

During their professional careers, managers in all organizations, profit and non-profit, interact with their accounting systems. Sometimes the manager uses the accounting system to acquire information for decision making. At other times, the accounting system measures the performance and influences the behavior of the manager. The accounting system is both a source of information for decision making and part of the organization's control mechanisms. Thus, the title of the book, *Accounting for Decision Making and Control*.

The purpose of this book is to provide students and managers with an understanding and appreciation of the strengths and limitations of an organization's accounting system, thereby allowing them to be more intelligent users of these systems. This book provides a framework for thinking about accounting systems and a basis for analyzing proposed changes to these systems. The text demonstrates that managerial accounting is an integral part of the firm's organizational infrastructure, not an isolated set of computational topics.

Distinguishing Features

Conceptual Framework	This book differs from other managerial accounting texts in several ways. The most important difference is that it offers a conceptual framework for the study of managerial accounting. This book relies on opportunity cost and organization theory as the underlying framework to organize the analysis. Opportunity cost is the conceptual foundation underlying decision making. While accounting-based costs are not opportunity costs, in some circumstances accounting costs provide a starting point to estimate opportunity costs. Recent advances in the theory of organizations and markets provide the conceptual foundation to understand how accounting is employed as part of the organization's control mechanism. These two concepts, opportunity costs and organization theory, provide the framework and illustrate the trade-offs created when accounting systems serve both functions, decision making and control.
Trade-offs	This text emphasizes that there is no "free lunch"; improving an accounting system's decision-making ability usually reduces its effectiveness as a control device. Likewise, using an accounting system as a control mechanism usually comes at the expense of using the system for decision making. Most texts stress the

importance of deriving different estimates of costs for different purposes. Existing books do a good job illustrating how accounting costs developed for one purpose, such as inventory valuation, cannot be used without adjustment for other purposes, such as a make-or-buy decision. However, these books often leave the impression that one accounting system can be used for multiple purposes as long as the users make the appropriate adjustments in the data.

What existing texts do not emphasize is the trade-off between designing the accounting system for decision making and designing it for control. For example, the current interest in activity-based costing presumably improves the accounting system's ability for decision making (pricing and product design), but existing texts do not address what activity-based costing gives up in terms of control. *Accounting for Decision Making and Control* emphasizes the trade-offs managers confront in an organization's accounting system.

Economic Darwinism

A central theme throughout this book is **economic Darwinism**, which simply implies that accounting systems that survive in competitive industries must be yielding benefits that are at least as large as their costs. While newer accounting innovations such as activity-based costing are described, the text also indicates through a series of company histories that many elements of today's modern costing systems can be traced back to much earlier times. It is useful to understand that managers in the 1990s are struggling with the same accounting issues as their predecessors, because today's students will also be struggling with the same problems. These problems continue to exist because they involve making trade-offs, usually between systems for decision making (e.g., product pricing and make-buy decisions) versus control (e.g., performance evaluation).

Accounting systems differ across firms and change as firms' circumstances change. Today's students will be making these trade-offs in the future. The current rage in managerial accounting texts is to present the latest, most up-to-date accounting system innovations. While recent innovations are important to discuss, they should be placed in their proper perspective. Traditional absorption costing systems have survived the test of time for over one hundred years. Accounting system innovations are new, not necessarily better. We certainly do not know if they will survive.

Logical Sequence

Another meaningful distinction between this text and other books in the field is that the chapters in this text build on one another. The first four chapters develop the opportunity cost and organization theory foundation for the course. The remaining chapters apply the foundation to analyzing specific topics such as budgets and standard costs. Most of the controversy in product costing involves apportioning overhead. Before absorption, variable, and activity-based costing are described, an earlier chapter provides a general analysis of cost allocation. This analysis is applied in later chapters as the analytic framework for choosing among the different product costing schemes. Other books emphasize a modular, flexible approach that allows instructors to devise their own sequence to the material, with the result that these courses often appear as a series of unrelated, disjointed topics without any underlying cohesive framework. This book has 14 chapters, compared with the usual 18–25. Instead of dividing a topic such as cost allocation into three small, disjointed chapters, most topics are covered in one or at most two unified chapters.

End-of-Chapter Material

The end-of-chapter problem material is an integral part of any text, and especially important in *Accounting for Decision Making and Control*. The problems and cases are drawn from actual company applications described by former students based on their work experience. Most problems require students to develop critical thinking skills and to write short essays after preparing their numerical analyses. Good problems get students excited about the material and generate lively class discussions. Many problems do not have a single correct answer. Rather, they contain multiple dimensions demanding a broad managerial perspective. Marketing, finance, and human resource aspects of the situation are frequently posed. Few problems focus exclusively on computations.

Changes in the Second Edition

Based on extensive feedback from instructors using the first edition and from my own teaching experience, the second edition focuses on improving the book's readability and accessibility. In particular, the following changes were made:

- Each chapter was rewritten and the pedagogy streamlined based on student and instructor feedback.
- Difficult material was rewritten or dropped.
- Additional actual company practices were integrated into the text.
- Four of the longest chapters were split into two chapters, thereby allowing students to begin working problems sooner and increasing the flexibility of designing courses. For example, many instructors do not want to cover overhead variances. The single chapter on standard costs in the first edition was split into two with overhead variances in the second chapter. New material on marketing variances was added to this chapter to expand the book's treatment of nonmanufacturing costing systems.
- Additional problem material, study questions, and cases supplement the existing problems. Users were uniform in their praise of the problem material. They found it challenged their students to critically analyze multidimensional issues while still requiring numerical problem-solving skills. Further problems and cases to complement this selection were added.

Overview of Content

Chapter 1 presents the book's conceptual framework by using a simple decision context regarding accepting an incremental order from a current customer. Unlike the first chapters of other books, Chapter 1 of *Accounting for Decision Making and Control* describes why firms use a single accounting system and the social science notion of economic Darwinism, among other important topics. This chapter is an integral part of the text.

Chapters 2, 4, and 5 present the underlying conceptual framework. The importance of opportunity costs in decision making, cost-volume-profit analysis, and the difference between accounting costs and opportunity costs are discussed in Chapter 2. Chapter 4 summarizes recent advances in the theory of organizations and markets, and Chapter 5 describes the crucial role of accounting as part of the firm's organizational architecture. Chapter 3 on capital budgeting extends opportunity costs to a multiperiod setting. This chapter can be skipped without

affecting the flow of later material. Alternatively, Chapter 3 can be assigned at the end of the course.

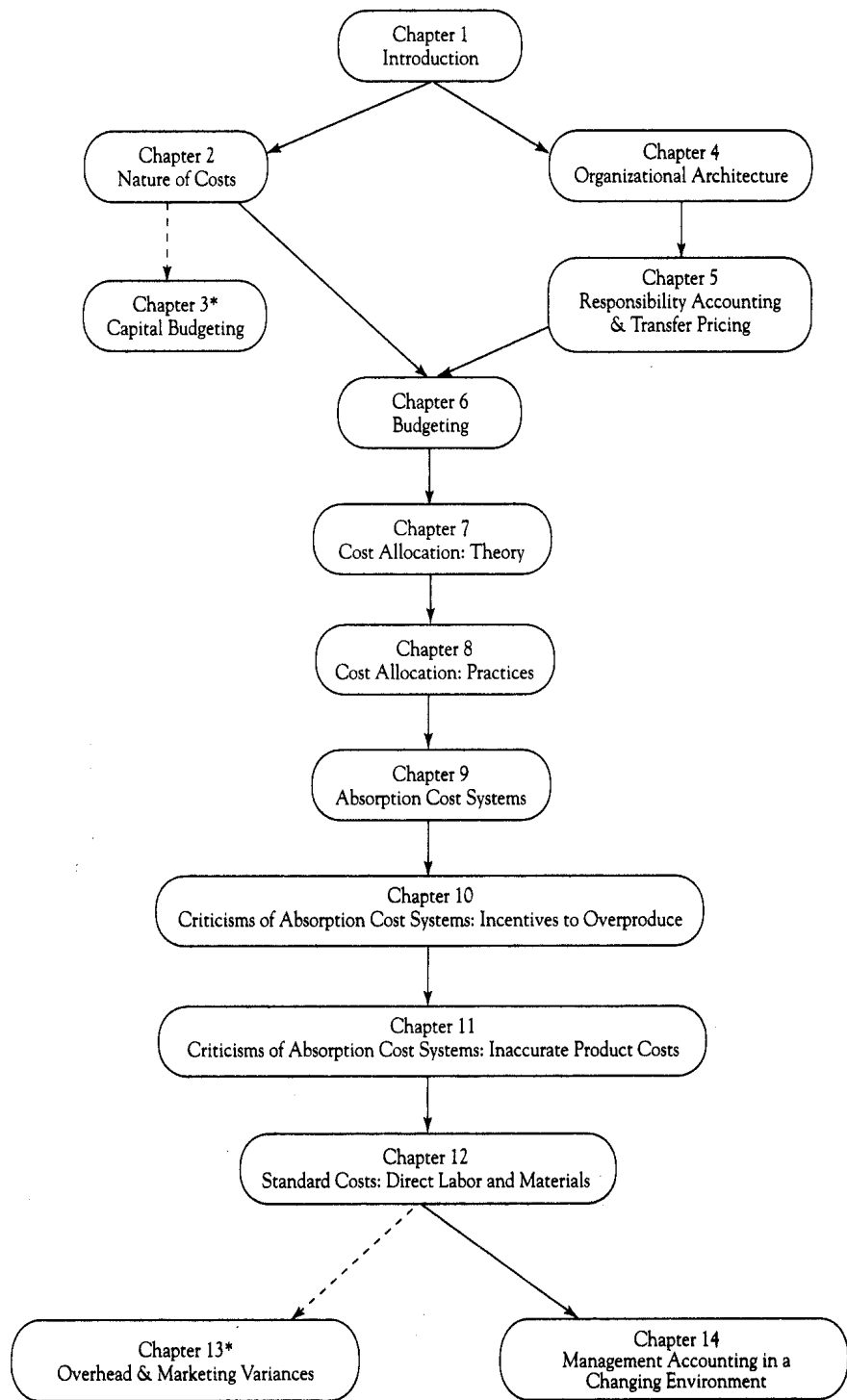
Chapter 6 applies the conceptual framework and illustrates the trade-off managers often must make between decision making and control in a budgeting system. Budgets are a decision-making tool to coordinate activities within the firm and are a device to control behavior. This chapter provides an in-depth illustration of how budgets are a significant part of an organization's decision-making and control apparatus.

Chapter 7 presents a general analysis of why managers allocate certain costs and the behavioral implications of these allocations. Cost allocations affect both decision making and incentives. Thus, there is again the trade-off between decision making and control. Several specific cost allocation methods such as service department costs and joint costs are described in Chapter 8.

Chapter 9 applies the general analysis of overhead allocation in Chapter 7 to the specific case of absorption costing in a manufacturing setting. The managerial implications of traditional absorption costing are provided in Chapters 10 and 11. Chapter 10 analyzes variable costing, and activity-based costing is the topic of Chapter 11. Variable costing is an interesting example of economic Darwinism. Proponents of variable costing argue that it does not distort decision making and therefore should be adopted. Nonetheless it is not widely practiced, probably because of tax, financial reporting, and control considerations.

Chapter 12 discusses the decision-making and control implications of standard labor and material costs. Chapter 13 extends the discussion to overhead and marketing variances. Chapter 13 can be omitted without interrupting the flow of later material. Finally, Chapter 14 synthesizes the course by reviewing the conceptual framework and applying it to three recent organizational innovations: productivity measures, Total Quality Management, and just-in-time (JIT) production. All three provide an opportunity to apply the analytic framework underlying the text.

Overview of Table of Contents



*Chapter can be omitted without interrupting the flow of material

Using the Text

This book assumes that the student is familiar with introductory financial accounting and understands simple demand and supply curves. *Accounting for Decision Making and Control* can be used in advanced undergraduate, graduate, or executive programs. Earlier versions of the manuscript were utilized extensively as the text in introductory MBA and Executive-MBA managerial accounting courses. While the book relies on opportunity costs and concepts concerning organizations and markets, much of the discussion is at a fairly intuitive level, requiring little mathematics. To focus on the managerial implications of the material, journal entries are deliberately de-emphasized.

The text is concise, which allows the instructor to supplement the course with additional outside readings or heavy problem assignments. The text has been used in a ten-week quarter course with few outside readings and two to three hours of homework assignments for every class period. MBA students find this challenging and rewarding. They report a better understanding of how to use accounting numbers, are more comfortable at preparing financial analyses, and are better able to take a set of facts and communicate a cogent analysis. Alternatively, the text can support a semester-length course.

The economics of organizations is one of the two conceptual frameworks underlying this textbook (the other is opportunity cost). Other organizational theories could have been applied to develop this part of the conceptual framework. The particular organizing vehicle used by this text is not necessarily inconsistent with other views. Alternative schemes to reinforce the analysis can be presented in class or through outside readings.

Some of the more challenging material is presented in appendixes following the chapters. Appendixes to Chapter 2 describe learning curves and some of the difficulties encountered trying to estimate fixed and variable costs using regression analysis. The reciprocal method for allocating service department costs is described in the appendix to Chapter 8. The appendix to Chapter 9 describes process costing. The Malcolm Baldrige National Quality Award is described in the appendix to Chapter 14. Appendixes can be deleted without affecting future chapter discussions.

Supplements

Several important supplements accompany *Accounting for Decision Making and Control*. For the second edition, I have significantly expanded the *Solutions Manual*. It now provides chapter-by-chapter teaching strategies, suggested problem assignments, recommended outside cases, lecture notes, and, of course, complete solutions to all problem and case material within the text.

For this edition, Professor Will Yancey of Texas Christian University has created an *Instructor's Resource Manual*. The *Instructor's Resource Manual* includes a PowerPoint disk containing teaching slides to add an important visual dimension to your lectures. This IRM also contains additional teaching strategies and tips, including many recommendations from first edition adopters. For the student, we have published *Ready Notes*, a printed version of Professor Yancey's PowerPoint slides with room for your students to take notes.

Acknowledgments

The genesis for this book and its approach reflect the oral tradition of my colleagues, past and present, at the University of Rochester. William Meckling and

Michael Jensen stimulated my thinking and provided much of the theoretical structure underlying the book, as anyone familiar with their work will attest. My long and productive collaboration with Ross Watts sharpened my analytical skills and further refined the approach. He also furnished most of the intellectual capital for Chapter 3, including the problem material. Ray Ball has been a constant source of stimulating ideas and has contributed to my understanding of managerial accounting. Clifford Smith and James Brickley continue to enhance my economic education. Three colleagues, Andrew Christie, Dan Gode, and Scott Keating supplied particularly insightful comments that enriched the analysis at critical junctions. Valuable comments from Ron Dye, Kenneth Gartrell, and Joseph Weintrop are gratefully acknowledged.

The second edition benefited greatly from the honest and intelligent feedback of first edition instructors. I wish to thank Mahendra Gupta, Badr Ismail, Don May, Ram Ramachandran, Stephen Ryan, Michael Sandretto, Richard Sansing, Gary Schneider, and William Yancey. This edition also benefited from two other projects with which I have been involved. Writing *Managerial Economics and Organizational Architecture* (Richard D. Irwin, 1997) with James Brickley and Clifford Smith and *Managerial Accounting* (Richard D. Irwin, 1997) with Dale Morse, they helped me to better understand how to present certain topics. Many of the improvements in this edition are attributable to Jim, Cliff, and Dale.

To the numerous students who endured the development process, I owe an enormous debt of gratitude. I hope they learned as much from the material as I learned teaching them. Some were even kind enough to provide critiques and suggestions, in particular Jan Dick Eijkelboom. Others supplied, either directly or indirectly, the problem material in the text. The able research assistance of P. K. Madappa, Eamon Molloy, Jodi Parker, Steve Sanders, Richard Sloan, and especially Gary Hurst, contributed amply to the manuscript and problem material. Permission has been received from the Institute of Certified Management Accountants of the Institute of Management Accountants to use questions and/or unofficial answers from past CMA examinations. Financial support was received from the John M. Olin Foundation.

I learned how much a world-class publisher can enhance a textbook. Publishing textbooks requires a publisher with insight, dedication to detail, and patience. My colleagues at Richard D. Irwin, especially Jeff Shelstad and Mike Junior, have these qualities and made this book a reality. Janice Willett and Barbara Schnathorst did a superb job of editing the manuscript and problem material.

Besides providing editorial and production assistance, the publisher manages the outside review process. The very useful comments and suggestions from the following reviewers are greatly appreciated:

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Kathy Jones, my very able assistant, had the difficult and often impossible task of managing and editing the manuscript and instructor manual. She did a superb job. To my wife Dodie and daughters Daneille and Amy, thank you for setting the right priorities and for giving me the encouragement and environment to be productive. Finally, I wish to thank my parents for all their support. As much as I wish the blame for any remaining errors in the book could be shared with all those who helped with its advances, I alone retain all the residual accountability.

Jerold L. Zimmerman
University of Rochester

Brief Contents

Chapter 1	Introduction	3
Chapter 2	The Nature of Costs	25
Chapter 3	Opportunity Cost of Capital and Capital Budgeting	91
Chapter 4	Organizational Architecture	143
Chapter 5	Responsibility Accounting and Transfer Pricing	177
Chapter 6	Budgets and Budgeting	231
Chapter 7	Cost Allocation: Theory	305
Chapter 8	Cost Allocation: Practices	365
Chapter 9	Absorption Cost Systems	413
Chapter 10	Criticisms of Absorption Cost Systems: Incentive to Overproduce	477
Chapter 11	Criticisms of Absorption Cost Systems: Inaccurate Product Costs	507
Chapter 12	Standard Costs: Direct Labor and Materials	553
Chapter 13	Overhead and Marketing Variances	591
Chapter 14	Managing Accounting in a Changing Environment	633
Glossary		701
Index		711

Table of Contents

Chapter 1 Introduction 3

- A. Managerial Accounting: Decision Making and Control 4
- B. Design and Use of Cost Systems 7
- C. Marmots and Grizzly Bears 12
- D. Management Accountant's Role in the Organization 14
- E. Vortec Medical Probe Example 17
- F. Outline of the Text 20
- G. Summary 21

Chapter 2 The Nature of Costs 25

- A. Opportunity Costs 26
 - 1. Characteristics of Opportunity Costs 27
 - 2. Examples of Decisions Based on Opportunity Costs 28
 - B. Cost Variation 31
 - 1. Fixed, Marginal, and Average Costs 31
 - 2. Linear Approximations of Opportunity Cost of Changing Volume 34
 - 3. Other Cost Behavior Patterns 36
 - 4. Activity Measures 37
 - C. Cost-Volume-Profit Analysis 40
 - 1. Copier Example 40
 - 2. Calculating Break-Even and Target Profits 41
 - 3. Limitations of Cost-Volume-Profit Analysis 45
 - 4. Operating Leverage 46
 - D. Opportunity Costs versus Accounting Costs 47
 - 1. Period versus Product Costs 48
 - 2. Direct Costs, Overheads, and Opportunity Costs 49
 - E. Cost Estimation 52
 - 1. Account Classification 52
 - 2. Motion and Time Studies 52
 - F. Summary 53
- Appendix A: Learning Curve Analysis 54
- Appendix B: Estimating Fixed and Variable Costs 56

Chapter 3 Opportunity Cost of Capital and Capital Budgeting 91

- A. Opportunity Cost of Capital 93
- B. Interest Rate Mathematics 95
 - 1. Future Values 95
 - 2. Present Values 96
 - 3. Present Value of a Cash Flow Stream 97
 - 4. Perpetuities 97
 - 5. Annuities 98

- 6. *Multiple Cash Flows per Year* 100
- C. *Capital Budgeting: The Basics* 102
 - 1. *Decision to Acquire an MBA* 102
 - 2. *Decision to Open a Video Rental Store* 103
 - 3. *Essential Points about Capital Budgeting* 104
- D. *Capital Budgeting: Some Complexities* 106
 - 1. *Risk* 106
 - 2. *Inflation* 107
 - 3. *Taxes and Depreciation Tax Shields* 109
- E. *Alternative Investment Criteria* 111
 - 1. *Payback* 112
 - 2. *Accounting Rate of Return* 113
 - 3. *Internal Rate of Return (IRR)* 114
 - 4. *Methods Used in Practice* 117
- F. *Summary* 118

Chapter 4 Organizational Architecture 143

- A. *Basic Building Blocks* 144
 - 1. *Self-Interested Behavior, Team Production, and Agency Costs* 144
 - 2. *Decision Rights and Rights Systems* 150
 - 3. *Role of Knowledge and Decision Making* 151
 - 4. *Markets versus Firms* 152
 - 5. *Influence Costs* 156
- B. *Organizational Architecture* 157
- C. *Example of Accounting's Role: Executive Compensation Contracts* 163
- D. *Summary* 166

Chapter 5 Responsibility Accounting and Transfer Pricing 177

- A. *Accounting's Role in the Organization's Architecture* 178
- B. *Responsibility Accounting* 181
 - 1. *Cost Centers* 182
 - 2. *Profit Centers* 184
 - 3. *Investment Centers* 186
 - 4. *Controllability Principle* 191
- C. *Transfer Pricing* 194
 - 1. *International Taxation* 194
 - 2. *Economics of Transfer Pricing* 197
 - 3. *Common Transfer Pricing Methods* 201
 - 4. *Reorganization: The Solution If All Else Fails* 205
 - 5. *Actual Practice* 206
- D. *Summary* 209

Chapter 6 Budgets and Budgeting 231

- A. *Generic Budgeting Systems* 234
 - 1. *Country Club* 234
 - 2. *Private University* 238

- 3. *Complex Corporation* 241
- B. Trade-offs between Decision Management and Decision Control 244
 - 1. *Communicating Specialized Knowledge versus Performance Evaluation* 244
 - 2. *Managing the Trade-off* 245
 - 3. *Participative Bargaining* 247
- C. Budgeting Resolves Certain Organizational Problems 248
 - 1. *Short-Run versus Long-Run Budgets* 249
 - 2. *Line-Item Budgets* 250
 - 3. *Budget Lapsing* 251
 - 4. *Static versus Flexible Budgets* 252
 - 5. *Incremental versus Zero-Based Budgets* 254
- D. Summary 256
- Appendix: *Comprehensive Master Budget Illustration* 257

Chapter 7 Cost Allocation: Theory 305

- A. Pervasiveness of Cost Allocations 307
 - 1. *Manufacturing Organizations* 310
 - 2. *Hospitals* 310
 - 3. *Universities* 311
- B. Reasons to Allocate Costs 313
 - 1. *External Reporting/Taxes* 313
 - 2. *Third-Party Reimbursement* 313
 - 3. *Decision Making and Control* 314
- C. Incentive/Organizational Reasons for Cost Allocations 315
 - 1. *Cost Allocations Are a Tax System* 315
 - 2. *Factor Price Understates Total Cost* 317
 - 3. *Insulating versus Noninsulating Cost Allocations* 324
- D. Summary 328

Chapter 8 Cost Allocation: Practices 365

- A. Death Spiral 366
- B. Allocating Service Department Costs 367
 - 1. *Direct Allocation Method* 368
 - 2. *Step-Down Allocation Method* 370
 - 3. *Service Department Costs and Transfer Pricing of Direct and Step-Down Methods* 374
 - 4. *Reciprocal Allocation Method* 376
 - 5. *Summary* 378
- C. Joint Costs 379
 - 1. *Chickens* 380
 - 2. *Net Realizable Value* 381
 - 3. *Decision Making and Control* 383
- D. Segment Reporting and Joint Benefits 384
- E. Summary 386
- Appendix: *Reciprocal Method for Allocating Service Department Costs* 386

Chapter 9 Absorption Cost Systems 413

- A. Job Order Costing 415
- B. Cost Flows through the Accounts 417
- C. Allocating Overhead to Jobs 420
 - 1. Overhead Rates 420
 - 2. Over/Underabsorbed Overhead 423
 - 3. Flexible Budgets to Estimate Overhead 425
 - 4. Expected versus Normal Volume 426
- D. Permanent versus Temporary Volume Changes 431
- E. Plantwide versus Multiple Overhead Rates 432
- F. Process Costing: The Extent of Averaging 435
- G. Summary 436
- Appendix: Process Costing 437

Chapter 10 Criticisms of Absorption Cost Systems:
Incentive to Overproduce 477

- A. Incentive to Overproduce 479
 - 1. Example 479
 - 2. Reducing the Overproduction Incentive 481
- B. Variable (Direct) Costing 482
 - 1. Background 482
 - 2. Illustration of Variable Costing 483
 - 3. Overproduction Incentives under Variable Costing 484
- C. Problems with Variable Costing 486
 - 1. Classifying Fixed Costs as Variable Costs 486
 - 2. Ignores Opportunity Cost of Capacity 486
- D. Beware of Unit Costs 487
- E. Summary 489

Chapter 11 Criticisms of Absorption Cost Systems:
Inaccurate Product Costs 507

- A. Inaccurate Product Costs 508
- B. Activity-Based Costing 510
 - 1. Choosing Cost Drivers 511
 - 2. Absorption versus Activity-Based Costing: An Example 516
- C. Analyzing Activity-Based Costing 519
 - 1. Reasons for Implementing Activity-Based Costing 519
 - 2. Benefits and Costs of Activity-Based Costing 521
- D. Acceptance of Activity-Based Costing 524
- E. Summary 528

Chapter 12 Standard Costs: Direct Labor and Materials 553

- A. Standard Costs 554
 - 1. Reasons for Standard Costing 555
 - 2. Setting and Revising Standards 557
 - 3. Target Costing 558

- B. Direct Labor and Materials Variances 560
 - 1. Direct Labor Variances 561
 - 2. Direct Materials Variances 564
- C. Incentive Effects of Direct Labor and Materials Variances 568
 - 1. Build Inventories 569
 - 2. Externalities 569
 - 3. Discourage Cooperation 570
 - 4. Mutual Monitoring 570
 - 5. Satisficing 570
- D. Disposition of Standard Cost Variances 571
- E. The Costs of Standard Costs 573
- F. Summary 576

Chapter 13 Overhead and Marketing Variances 591

- A. Budgeted, Standard, and Actual Volume 592
- B. Overhead Variances 595
 - 1. Flexible Overhead Budget 595
 - 2. Overhead Rate 596
 - 3. Overhead Absorbed 597
 - 4. Overhead Efficiency, Volume, and Spending Variances 598
 - 5. Graphical Analysis 601
 - 6. Inaccurate Flexible Overhead Budget 603
- C. Marketing Variances 604
 - 1. Price and Quantity Variances 605
 - 2. Mix and Sales Variances 606
- D. Summary 607

Chapter 14 Management Accounting in a Changing Environment 633

- A. Integrative Framework 636
 - 1. Organizational Architecture 637
 - 2. Business Strategy 639
 - 3. Environmental and Competitive Forces Affecting Organizations 641
 - 4. Implications 642
- B. Organizational Innovations and Management Accounting 643
 - 1. Productivity 643
 - 2. Total Quality Management (TQM) 648
 - 3. Just-in-Time (JIT) Production 655
- C. When Should Management Accounting Be Changed? 661
- D. Summary 661
- Appendix: Malcolm Baldrige National Quality Award 662

Solutions to Concept Questions 691

Glossary 701

Index 711