

Managerial Accounting

S E V E N T H E D I T I O N

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Managerial **A**ccounting

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PREFACE

This edition of *Managerial Accounting* has been extensively revised. The objective, however, remains unchanged: to explain how accounting data can be interpreted and applied by managers in planning and controlling business activities and in solving problems. Attention is also given to the use of accounting data by investors and potential investors whenever appropriate.

The book is intended for a one-semester or a one-quarter course for students who expect to use accounting data in their future occupations. We believe that accounting majors will benefit from this material as much as students who are studying other fields of business and economics. Professional accountants must be as familiar with the use of accounting data as they are with its collection and presentation. It is important for accountants to know the *why* as well as the *how*. Students should use this book after having had a one-semester or two-quarter course in the introductory principles of accounting. Students who need a review of introductory accounting are referred to Appendices A and B, which deal concisely with the accounting cycle.

The textbook may be used for undergraduate courses, for MBA students, and for executive development programs. It is not an advanced level text but, instead, is intended to give the student an introductory level exposure to the use of accounting data in the management of a business or a not-for-profit enterprise.

While concepts and theories are discussed to some extent as an aid in understanding, the primary focus is on the pragmatic aspects. Illustrations and examples are given throughout the text to show how accounting data can be applied in solving management problems. It is expected that a student completing the course will have not just a theoretical background, but will be able to put the concepts to work in actual situations.

ORGANIZATION OF MATERIAL

The text consists of five distinct parts:

Part		Chapters
I	Introduction	1–2
II	Cost Determination and Control	3–7
III	Profit Planning	8–11
IV	Analysis and Decision Making.....	12–15
V	Interfaces of Financial and Managerial Accounting.....	16–18

Part I serves as an introduction. In Chapter 1, a distinction is made between financial and managerial accounting. The business organization and the accountant's role in the organization are discussed more completely than in earlier editions. The

concept of budgeting is introduced in the first chapter, but a more complete discussion is deferred to Chapters 10 and 11. Cost concepts and terminology are the subjects of Chapter 2. Special attention is also given to differences between service, merchandising, and manufacturing organizations.

Part II concentrates on costs—how they can be determined and identified with services and manufactured products. In addition, it explains the ways in which costs can be controlled. Chapters 3 and 4 concentrate on cost accumulation systems—job order costing and process costing, respectively. Process costing has been expanded to cover both the FIFO and average cost inventory methods. In addition, Chapter 4 is self-contained and may be omitted by instructors who do not wish to cover the process cost system. The concepts of standard cost accounting for direct materials and direct labor are covered in Chapter 5. Cost control applications are explained and illustrated. Chapter 6 applies standard costs to manufacturing overhead, covering service and governmental entities, and not-for-profit organizations, as well as manufacturing and merchandising organizations. Variances are explained and computed. The segregation of semivariable costs into variable and fixed components is the subject of Chapter 7. Emphasis is placed on accurate cost estimation because the costs are used in budgeting and cost control.

Part III covers profit planning. Cost-volume-profit relationships are explained in Chapter 8, along with the significance of operating leverage and margin of safety. The break-even concept and the factors that interact to increase profitability are discussed and illustrated. Variable costing (direct costing) is compared with absorption costing in Chapter 9. The advantages of both methods are presented, and the differences between them are illustrated more completely in this edition. Chapters 10 and 11 expand the conceptual and applied material on budgeting with a complete treatment of both operating and financial budgets. Cash budgeting, as a part of the financial budget, is emphasized more heavily than in previous editions.

Part IV concentrates on analysis and decision making. Chapter 12 goes more into the theory of decision making than was the case in earlier editions. Applications are given for pricing theory, product combinations, make or buy, and distress selling. An explanation is also given to show why cost allocations can be misleading in managerial applications. An introduction to capital investment analysis is given in Chapter 13, with a comprehensive treatment of the time value of money and the present value concept. Capital investment decisions are discussed at length in Chapter 14, with a treatment of accelerated depreciation methods and the problem of uncertainty. Problems of decentralized operations and transfer pricing are discussed in Chapter 15, with increased attention to service organizations in this edition.

Part V includes topics that are important to both financial and managerial accounting. Strategies for coping with the price level problem are important in managerial accounting, and the principle of financial measurement in dollars that have the same measuring standard is important in financial accounting. Chapter 16 deals with both price level problems and foreign exchange. The conversion problem can be handled in much the same way for making price level adjustments and foreign exchange adjustments. This edition goes into the managerial aspects of foreign exchange differences to a greater extent than earlier editions. In Chapter 17, the analysis of financial statements is covered more completely than in earlier editions.

Chapter 18 discusses the importance of net working capital flow and cash flow, and shows how both can be computed.

SPECIAL HIGHLIGHTS OF THE TEXT

Chapter 4	A Process Cost System	The previous edition's appendix to Chapter 3 has been expanded to an entire chapter on process cost accounting. The number of illustrations has been increased as well.
Chapters 10 and 11	Budgets	These chapters offer an expanded treatment of both operating and cash budgets.
Chapter 16	Price Level and Foreign Exchange Problems	The price level conversion problem is simplified and related to foreign exchange conversions. Emphasis is on managerial strategies to minimize risk of loss on price level changes and changes in the rate of foreign exchange.
Chapter 18	Tracing the Flow of Net Working Capital and Cash	Increased attention is paid to cash flow analysis.

In addition to the revision of the chapters themselves, other features have been added. Excerpts from current periodicals, or articles detailing hypothetical business situations, have been given with each chapter. These articles serve to reinforce the link between the academic treatment of the subjects and the realities of the business world. A glossary has been added at the end of the text to help the student review key terms.

The end-of-chapter material has been extensively revised. The basic format is the same, with questions, exercises, and problems. Virtually all of the exercises and problems have been revised, and new ones have been added. Some problems have been identified as being more appropriate for solution by personal computers. Also, one or two cases have been added for many of the chapters. This provides a basis for interesting classroom discussion on points that are often controversial. (Student check figures are available for all chapter problems.)

SUGGESTIONS FOR SEQUENCING MATERIAL

Some chapters are designed so that they are partially or completely independent of other chapters. Chapter 4, for example, on process cost accounting, should come after Chapter 3, but later chapters do not depend upon Chapter 4 material. Chapter 7, on cost behavior and estimation, can be brought in before Chapters 5

and 6 on standard costing. Chapter 16, on price level and foreign exchange, can be introduced early in the course.

The course most likely will be conducted in a conventional way, with the chapters being covered in sequence. As an interesting variation, the course may begin with the problem of measuring in a unit of measurement that is always changing; that is, start with Chapter 16, the price level and foreign exchange chapter. Then, continue with Chapter 1 and the rest of the text in sequence. With students who need a review of basic accounting, it may be helpful to start with Appendices A and B. Also, in subject areas that have been expanded into two chapters, such as capital investment decisions, some instructors may want to assign both chapters as one unit. Or, if students are already familiar with present value concepts, Chapter 13 can be looked upon as a review chapter. The choice will depend to a large extent upon the background of the students and the time available for the course.

The authors acknowledge with gratitude the many helpful comments received from instructors and students who have used the sixth edition. Particular recognition is given for the help received from Professors Will H. Owen of Mississippi State University, James A. Largay III of Lehigh University, and Kenneth P. Sinclair of Lehigh University. Appreciation is also given to the many graduate students at Texas Tech University who critically reviewed the materials and made many suggestions for improvement. In addition we are grateful to Sharon M. Ruhf who typed and edited much of the manuscript.

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PART ONE

INTRODUCTION

MA

CHAPTER ONE

MANAGERIAL ACCOUNTING AND THE MANAGEMENT PROCESS

CHAPTER OBJECTIVES


After studying Chapter 1, you will be able to:

- Describe the groups who have a primary interest in the financial reports prepared under financial accounting and those who have an interest in managerial accounting information.
- Describe three conceptual frameworks used in managerial accounting for providing accounting information to managers.
- Enumerate and describe the basic differences between and similarities of financial accounting and managerial accounting.
- List the functions of the controller.
- Explain how the functions of management are carried out by planning decisions and control decisions.
- Describe how control can be accomplished through budgetary control and responsibility accounting.

Accounting is viewed as a profession of providing information about the economic activity of an organization. The objective of financial accounting is to organize accounting information for interested parties outside of the organization. Managerial accounting, on the other hand, focuses on the accounting information needs of the various levels of management within the organization. Although strict lines of distinction between the two approaches to accounting are not always essential, financial and managerial accounting concepts are reviewed primarily as separate branches in this chapter.

NEED FOR ACCOUNTING INFORMATION

Economic activity is represented by events transpiring in industry, state and local governments, federal government, foundations and institutes, and other not-for-profit organizations. As one can easily imagine, the variety of products and services provided by different organizations is extremely broad. For example, the following list represents just a sampling of what American industry makes available.



Goods and Services Provided by American Industry	
Aerospace and defense	Food processors
Air transportation	Health care
Apparel, shoes, and textiles	Heavy equipment
Automotive equipment	Industrial and office services
Banks and thrifts	Insurance
Beverages	Leisure and recreation
Chemicals	Metals
Coal	Natural gas
Communication media	Oil
Computers and electronics	Packaging
Construction	Paper
Electrical equipment	Retailing
Electric utilities	Surface transportation
Financial services	Telecommunications
Food distributors	

Figure 1.1 Goods and Services Provided by American Industry

Almost every participant in economic activity uses accounting information of one kind or another. As shown in the following diagram these needs are met either through financial accounting or managerial accounting. Each branch of accounting reports to those parties most interested in the kinds of information provided.