# COSTACCOUNTING

TRADITIONS
AND
INNOVATIONS

THIRD EDITION



Barfield Raiborn Kinney

# COST ACCOUNTING

TRADITIONS AND INNOVATIONS

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234/9

SOUTH-WESTERN COLLEGE PUBLISHING COPYEDITING Kathy Pruno

COMPOSITION Parkwood Composition Services, Inc.

TEXT DESIGN Metier, Inc.

PAGE LAYOUT Maureen McCutcheon

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5101 Madison Road Cincinnati, OH 45227

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Printed in the United States of America

04 03 02 01 00 99 98 97

8 7 6 5 4 3 2

#### Library of Congress Cataloging-in-Publication Data

Barfield, Jesse T.

Cost accounting: traditions and innovations / Jesse T. Barfield,

Cecily A. Raiborn, Michael R. Kinney.—3rd ed.

p. cm.

Includes index.

ISBN student edition 0-538-88047-3

annotated edition 0-538-88137-2

looseleaf edition 0-538-88138-0

1. Cost accounting. I. Raiborn, Cecily A. II. Kinney, Michael

R. III. Title.

HF5686.C8B2758 1997

657'.42—dc20



# Preface

Contemporary business expects an accounting graduate to possess solid knowledge of the interrelated areas of cost and management accounting. Both are concerned with producing, reporting, and interpreting internal information for managers. Cost accounting determines the cost of manufacturing products and/or providing services in organizations involved in a conversion process. Conversion can include transforming a raw material into a finished good or an idea into a set of architectural plans. Product and service costs are needed both for internal management decisions and for cost of goods sold and inventory valuation on external financial statements. The broader area of management accounting, of which cost accounting is a part, involves the provision of accounting information for the managerial functions of planning, controlling, evaluating performance, and making decisions. Thus, management accounting is applicable in all organizations regardless of whether they engage in a conversion process.

The distinction between these two accounting areas is becoming increasingly blurred because of overlapping job functions, growth in information technology, and institution of new production methods that require the availability of more nontraditional information. Therefore, this text addresses both cost and management accounting issues by including coverage of traditional product costing methods as well as innovative topics such as accounting and organizational strategy, activity-based costing and management, quality costs, cost management systems, accounting effects of a just-in-time philosophy, use of nonfinancial and long-term performance measures, and performance rewards.

This book is written for students aspiring to become professional accountants and pursuing professional credentials such as Certified Management Accountant (CMA), Certified in Financial Management (CFM), Certified Public Accountant (CPA), and/or Certified Internal Auditor (CIA). The text presents the essential issues of cost and management accounting thoroughly but concisely for use in a one- or two-semester course in a college accounting program. Before taking cost accounting, students will ordinarily have taken a principles of accounting or financial accounting course.

**AUDIENCE** 

The text's chapter sequence reflects both curriculum characteristics and the authors' pedagogical preferences. Because many universities stress product cost computations in the first (or only) cost accounting course, we have placed the various product costing techniques (job order, process, joint, standard, and absorption/variable) at the beginning of the text in Chapters 7 to 12. In addition, topics such as standard costing and variance analysis are generally covered simultaneously in a cost accounting course even though standard costing is truly a product costing or planning topic whereas variance analysis is a management control and performance evaluation topic.

Part 1 (Chapters 1 through 3) provides a foundation in both the current business environment (including strategic and quality considerations) and management accounting. Part 2 (Chapters 4 through 6) presents a variety of issues related to cost terminology, cost flows, and the allocation of overhead costs. This section considers the roles of activity-based costing and activity-based management in modern world-

STRUCTURE

class businesses. Part 3 (Chapters 7 through 11) demonstrates the systems and methods of product costing, accounting for product shrinkage and expansion, and treatment of joint process costs. These chapters constitute the traditional cost accounting viewpoint in that the focus is on determining cost for use in valuation on financial statements. Parts 4 through 7 (Chapters 12 through 22) concentrate on managerial information needs and processes. These chapters are divided into the areas of planning (Chapters 12 to 14), controlling (Chapters 15 to 17), decision making (Chapters 18 and 19), and performance evaluation (Chapters 20 to 22).

The text's chapter sequence is only one way that the topics may be covered; other potential sequences are provided in the preface to the Instructor's Manual. Each chapter is written in a fairly stand-alone fashion, assuming that the basic definitions have been covered. Because the end-of-chapter exercises and problems predominantly relate directly to the material within the chapter, an instructor wishing to vary the sequence of chapters should find few difficulties in assigning end-of-chapter material. If a problem in one chapter includes a significant use of another chapter's material, it is so designated in the heading to the problem. (For example, a standard costing problem may also be designated as a process costing problem.)

The following changes to the third edition of *Cost Accounting Traditions and In-novations* increase the text's teachability and real-world focus and enhance the student's comprehension and intellectual skills.

## CHANGES IN THE THIRD EDITION

Because of its innovative topics, student orientation, readability, and inclusion of real-world applications and ethics, the previous editions of this text were very well received. The third edition continues these positive features from earlier editions; improves upon them by increasing their coverage as well as that of quality issues, multinational businesses, and modern business techniques such as Internet usage; and incorporates suggestions from users and reviewers for organizational and pedagogical changes.

The Accounting Education Change Commission (in its "Position Statement Number One: Objectives of Education for Accountants") has been instrumental in providing guidance on improving and expanding the text's pedagogical features. The AECC has indicated that it is essential for accounting graduates to possess strong communication, intellectual, and interpersonal skills as well as to understand professional ethics and make value-based judgments. Thus, to encourage students to improve their communication and intellectual skills, we have expanded the quantity of essay and "logic" problems in end-of-chapter materials, student study guide, and test bank. The end-of-chapter essay and logic problems directed at developing these skills are presented under the heading Communication Activities. To promote interpersonal skills, the Instructor's Manual provides ideas for group projects that may be assigned for oral or written presentation. And, to improve the process of analyzing and making ethical decisions, we have included more real-world ethics discussion questions in the end-of-chapter materials and a short end-of-text appendix about using these questions.

### Pedagogy

Each chapter contains an "Introducing" and "Revisiting" segment about a real organization. Through these chapter openers and closures, students are shown how the topics included in the chapter affect businesses on a daily basis. The opening vignettes have been selected to illustrate all types of organizations (domestic/international, profit/not-for-profit, large/small, and manufacturing/service). Some featured organizations are Ford Motor Co., ITT Sheraton, The Procter & Gamble Company, Binney & Smith Inc., Boeing Co., Genentech, Inc., Entergy Corporation, and Dell Computer Corp. Although a real organization's data cannot be used in chapter numerical computations (for competitive reasons), comparable data for an illustrative company in the same type of business are used throughout the chapter.

To reinforce the real-world perspective and maintain student interest, the chapters continue to contain boxed "News Note" examples from the current business press featuring up-to-date applications of text concepts in real-world situations. These "Notes" are keyed with graphic icons as being primarily related to one of the following areas of interest: general business, international, and quality. There are approximately three to five notes per chapter featuring such companies as Delta Wire, The HON Company, Hewlett-Packard, Intel, McDonnell Douglas Corp., and Toshiba.

The international and service dimensions of business have been heavily integrated in the chapters, illustrative examples, and end-of-chapter materials. Such inclusions reflect the ever-increasing global expansion of business enterprises and the diminished quantity of manufacturing in the United States.

Approximately 25 percent of the end-of-chapter material is new; some of these items reflect real-world situations. An attempt has been made to provide at least two exercises for each key concept in the chapter. Many of the new end-of-chapter materials are unstructured thought problems that require students to use their analytical skills to excerpt and organize relevant information from a set of facts. Such end-of-chapter materials are designed to enhance the students' intellectual skills rather than provide a mechanism for rote recalculation of text examples.

In addition to the end-of-text glossary, page references for chapter definitions are included for each key term in each chapter.

Topics are provided in parentheses for all exercises and problems to indicate the nature of the material included in the end-of-chapter item. These lead-ins make it easier for faculty to select end-of-chapter materials that reinforce chapter objectives or for students to select additional materials to supplement assigned homework.

#### Organization

Chapter 1 begins with a section on changes in the American business environment. This section discusses differences between the traditional short-run perspective and the emerging strategic perspective as well as differences between techniques used by smaller businesses versus those of advanced manufacturing firms. Inclusion of this section helps students to understand the business environment of which they will be a part.

Chapter 2 is a new chapter that discusses organizational strategy as the underlying linkage for all business activities and how such strategy relates to and is supported by accounting information.

The topics of conversion and stages of production are covered in Chapter 4 along with the discussions of direct material, direct labor, and overhead.

Chapter 5 combines coverage of use of predetermined overhead rates and allocation of factory and service department costs. Chapter 6 presents activity-based management and activity-based costing concepts.

The absorption and variable costing discussion has been shortened and integrated into the cost-volume-profit information in Chapter 12. This change makes the student aware of the need for variable costing figures in determination of breakeven level and in computation of volume levels necessary to generate specific profit amounts.

Chapter 15, "Designing a Cost Management System," is new and discusses the development, implementation, and maintenance of a continuous feedback system for communicating and using internal accounting information for all managerial functions.

The prior editions' two chapters on capital budgeting have been combined into one in deference to the primacy of this topic in finance courses.

Organizational performance has been separated into two chapters: one related to short-run (and more traditional) performance measurements; the other to long-run (and typically more innovative) performance measurements.

#### STYLE

This text is extremely student-oriented and integrates procedural methods with the conceptual and behavioral aspects of information that help students solve real-world problems. The authors have endeavored to make the text highly readable and to provide numerous examples, models, and illustrations of real-world applicability. The coverage is up-to-date and presents the effects on accounting of phenomena such as just-in-time inventory management, flexible manufacturing systems, and expanded global markets.

Features in the text (such as learning objectives, opening and closing vignettes, news notes, chapter summaries, demonstration problems, and a full range of end-of-chapter materials) have been designed to promote the learning process, provide a high student interest level, and make the text a valuable student resource. The inclusion of quality concepts, international business considerations, discussions of diverse types of organizations, and end-of-chapter materials focusing on actual quality and ethical issues reinforces the applied nature of the text and assists faculty to make the course information more relevant to the students.

## INSTRUCTOR SUPPORT MATERIALS

The instructor support package is an innovative response to the growing demand for creative and effective teaching methodologies. The supplements are designed to provide a comprehensive resource package for all faculty adopting this text; the materials used will depend on the faculty member's interest areas, class size, equipment availability, and teaching experience. All supplements not prepared by the authors have been reviewed by the authors for consistency and accuracy with the textual materials.

Annotated Instructor's Edition This special edition of the text was prepared by the authors and contains a variety of margin notes to improve and enhance teaching effectiveness and efficiency. The margin notes include:

- Teaching Notes that provide additional clarification of points or examples that might be used in class
- Points to Emphasize that indicate logical "checkpoints" of student clarity on subject matter
- Points to Consider that indicate questions to generate student responses which indicate understanding of text material
- Teaching Transparency notations that indicate points at which selected transparencies can be used (the transparency masters are included in the Instructor's Manual)
- Video Icons that identify points at which videos supplied by West Publishing could be used to enhance or reinforce text material
- Check Figures that provide solutions to numerical end-of-chapter materials

Instructor's Manual This manual (developed by Gregory K. Lowry of Mercer University) provides a listing of terminology, a lecture outline summary, an assignment classification table (indicating the topical breakdown and level of difficulty of end-of-chapter items, some CMA exam multiple-choice questions for use as additional test materials or for quizzes, and a selected bibliography of current readings for each chapter. Masters for over 40 teaching transparencies referenced in the Annotated Instructor's Edition are also included at the end of this volume. These masters are *not* duplicates of textual exhibits, but rather provide additional perspectives on text materials.

Solutions Manual This volume, prepared by the authors and independently reviewed and checked for accuracy, contains complete solutions to each question, exercise, problem, and case in the text. Some suggested discussion points or (if from professional exams) complete answers are provided for the ethics and quality questions, but no distinct right-or-wrong answers are given. This volume also contains a copy of the Student Check Figures.

Solution Transparency Acetates Approximately 250 acetates are provided from the solutions manual for all numerical end-of-chapter materials.

PowerPoint Presentation/Transparency Masters This package (prepared by Donna S. Dietz of Concordia College) is a state-of-the-art presentation graphics program for Microsoft Windows. All transparency material is preloaded onto the program, which gives instructors the opportunity to customize (by editing, adding, or deleting material) transparencies so they are specific to classroom needs. Illustrations include additional problems with solutions, definitions, charts, graphs, figures, and other visual support not found in the text. PowerPoint Presentation's animation allows for scalable type, type manipulation, shape and color blends, and variable zoom. Transparency masters are black and white printouts of each slide in the presentation.

Test Bank The Test Bank has been prepared by Chandra Schorg of Texas Woman's University and contains over one thousand multiple-choice, short exercise, and short discussion questions with related solutions. It has been updated from the second edition to include approximately 30 percent new materials. Two to three additional computational problems have been added for each numerically based chapter.

WesTest This supplement is a computerized version of the hard-copy test bank. WesTest includes edit and word processing features that allow test customization through the addition, deletion, or scrambling of test selections. WesTest is available in DOS, Windows, and Macintosh formats.

Videos Because the video packages accompanying the previous editions were so highly praised, additional new videos are available. There are an average of three to four video segments of various lengths per chapter. All of the previously available videos from the Association for Manufacturing Excellence-"On the Road to Manufacturing Excellence," "We're Getting Closer," and "Managing the Supply Chain" are available to adopters. Multiple years of the video library titled "Strengthening America's Competitiveness: Resource Management Insights for Small Business Success" are also available. These videos were developed by the Blue Chip Enterprise Initiative, sponsored by Connecticut Mutual Life Insurance Company, the U.S. Chamber of Commerce, and Nation's Business magazine. This initiative seeks out and recognizes businesses that have demonstrated exceptional management of key resources to meet challenges and emerge stronger. Almost every chapter in the text has one or more videos to accompany it; points of reference for classroom use are fully integrated in the Annotated Instructor's Edition. These tapes are provided free to qualified adopters.

*Video Guide* A video guide has been developed to accompany the video package and provide information on length, alternative points of usage within the text, highlights to address, and some discussion questions to stimulate classroom discussion.

Student supplements are essential to the provision of a quality supplement package and are important in helping students to learn on their own—a factor stressed by the Accounting Education Change Commission. The following items are available for students.

Student Study Guide This study guide is a chapter-by-chapter manual that allows students, through independent review and self-examination, to gain additional exposure and reinforce the materials detailed in the text. The study guide contains chapter learning objectives, overviews, detailed chapter notes, and self-test questions. The study guide has been updated to include approximately 40 percent new materials, and two to three additional computational problems have been added for each numerically based chapter. In addition, several projects are included for each chapter that allow students to exercise their written and oral communication and logic skills and, at the same time, develop their interpersonal skills through interaction with other students.

Student Check Figures For instructors who wish to provide students with answers to end-of-chapter materials, this list has been prepared by the authors from the solutions contained in the solutions manual. The check figures provide a refer-

#### STUDENT SUPPORT MATERIALS

ence point answer for all numerical end-of-chapter materials, except those for which the provision of a check figure would be inappropriate. Check figures are available free of charge, when ordered to be shrink-wrapped with the textbook.

Spreadsheet Templates (developed by Greg Lowry of Mercer University) allows students to solve selected end-of-chapter exercises and problems using Excel®. This package, which includes student and instructor disks, requires students to identify the issues of the problem, program the necessary formulas, and input the data from the exercise or problem.

*Practice Sets* Two practice sets are available to supplement students' understanding of specific text materials.

Weston Manufacturing: An Activity-Based Costing Case, prepared by Bob Needham of Bucknell University, illustrates activity-based costing using a manufacturing company that produces agricultural irrigation systems and customized commercial irrigation systems. This practice set concentrates on determination of cost drivers and their use in assigning overhead costs to products. It can be used when teaching Chapter 6 or in conjunction with several chapters from the text to show the student the impact of activity-based costing on decision making. A solutions manual is available for instructors.

Laser Logos, Inc. is a computerized practice set that was written by Dana Forgione of The University of Baltimore and L. Murphy Smith of Texas A&M University. It provides students with the opportunity to develop a complete master budget and to use the budgeted information to make managerial decisions. A solutions manual indicates how the practice set can be used in conjunction with Chapter 14 or as a continuing problem for the entire term. The student workbook is available in IBM-compatible format with a disk.

Student Notetaking Guide This unique supplement includes copies of the transparencies provided to instructors. They are printed at fifty percent normal size on full sheets, with space for students to take lecture notes. Detailed outlines are also provided.

Insights: Readings in Cost Accounting, a readings book, is available for those faculty who wish to supplement text assignments with articles from the current business press. This softcover book contains approximately 20 selections from FORTUNE, Management Accounting, Journal of Accountancy, and Journal of Cost Management that discuss contemporary issues in cost and management accounting.

English as a Second Language Supplement is available for students for whom English is a second language. This supplement, prepared by Luis Guillén, contains a Spanish glossary of all key terms found in the text.

#### Acknowledgments

We would like to thank all the people who have helped us during the revision of this text. The constructive comments and suggestions made by the following reviewers were instrumental in developing, rewriting, and improving the quality, readability, and student orientation of *Cost Accounting: Traditions and Innovations* 3rd edition.

C. Richard Aldridge Western Kentucky University Tarek Amer Northern Arizona University C. Douglas Cloud Pepperdine University—Malibu Henry H. Davis Eastern Illinois University Nena Hankins Kent State University Judith Harris Bryant College University of Richmond Phil Jones Robert C. Kee University of Alabama Northern Illinois University David E. Keys Mercer University Greg Lowry Donald Madden University of Kentucky

Annie McGowan Robert Putnam

Texas A&M University

University of Tennessee at Martin

Joe Weintrop Baruch College

Special mention must be given to Margie Boldt at the University of Oklahoma, Annie McGowan at Texas A&M University, and Cynthia Kreisner at Austin Community College for their hard work as problem checkers and to Joel Ridenour for his arduous task of obtaining all the necessary permissions. In addition, use of materials from the Institute of Management Accountants and American Institute of CPAs, the various periodical publishers, and the featured organizations have contributed significantly to making this text a truly useful learning tool for the students. Lastly, the authors thank all the people at West Publishing (Rick Leyh, Alex von Rosenberg, Cathy Story, Holly Henjum, Elsa Peterson, Kathy Pruno, and Erin Ryan Titcomb) who have helped us on this project, and our families and friends for their support and encouragement during this process.

Jesse Barfield Cecily Raiborn Mike Kinney

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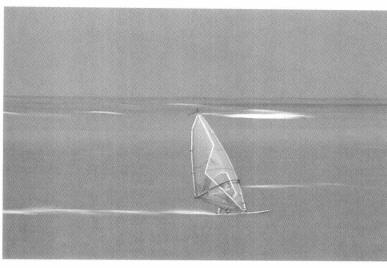
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