

Management Accounting

INFORMATION FOR DECISION MAKING AND STRATEGY EXECUTION

Sixth Edition

Anthony A. Atkinson • Robert S. Kaplan
Ella Mae Matsumura • S. Mark Young

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MANAGEMENT ACCOUNTING

Information for Decision-Making and Strategy Execution

SIXTH EDITION

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PREFACE

Intended Audience

The sixth edition of *Management Accounting* targets undergraduate and MBA courses in managerial accounting with a major redesign and several new topics. It integrates state-of-the-art thinking on recent innovations in management accounting including:

- the Balanced Scorecard,
- strategy maps,
- time-driven activity-based costing for product and customer profitability analysis,
- target costing,
- environmental costing, and
- the design of management control systems.

The author team consists of top scholars who have served as advisers to small, medium-sized, and large enterprises in the private, nonprofit, and public sectors. They present a conceptually sound and practically relevant perspective on the role of management accounting information in informing important decisions made by business managers, aligning employees and organizational units with strategic objectives, driving continuous process improvements, and influencing the design of products and services. The sixth edition provides problems and cases drawn from the authors' practical experience including cases from Harvard Business School and the Institute of Management Accountants (IMA) that engage students in strategic and organizational analyses. This action orientation makes the text an excellent fit for management accounting courses taught from a managerial perspective. Although this text is primarily intended for business and accounting students, it will also be useful to practicing managers who would benefit from understanding how to mobilize management accounting to drive value in their organizations.

All Enterprises Need Management Accounting

Management accounting information creates value for all types of organizations: private sector companies attempting to deliver superior and sustainable returns to shareholders, nonprofit and nongovernmental organizations (NGOs) striving to deliver positive social impact to targeted constituents, and public-sector agencies that are empowered to improve the lives of citizens. The common thread across all of these diverse enterprises is how to implement a strategy that delivers long-term value to their stakeholders. Strategy implementation requires decision making that is aligned with strategic goals, continuous improvement of critical processes, motivation and alignment of employees with organizational objectives, and innovation that develops new products and services. This book is the only management accounting book that explains in detail how to use measurement and management systems for sustainable value creation.

New to This Edition

- Chapter 1 introduces the plan–do–check–act cycle as an organizing framework for embedding multiple management accounting processes.
- Chapter 2 is an updated and repositioned chapter on the Balanced Scorecard and strategy maps. It uses an extended example, drawn from an actual company's experience, to illustrate how to develop a Balanced Scorecard and strategy map for a company's new strategy. Placing this chapter at the front of the book helps students to understand the strategic context for the measurement, decision-making, and control topics discussed in subsequent chapters.
- Chapter 3 is an entirely rewritten chapter for introducing students to fundamental cost concepts. Variable, fixed, incremental, relevant, sunk, avoidable, and opportunity costs are explained and illustrated. Students' understanding of the concepts is highlighted through decision-making examples on make versus buy, product abandonment, financial modeling for what-if analyses, and product mix optimization with constrained resources. The chapter ends with several numerical examples that enable students to test their ability to apply fundamental cost concepts in diverse settings. In addition, the chapter contains a new case on product costing and decision analysis in the wine industry.
- Chapter 4, also a major update for the sixth edition, provides the foundation for understanding how cost systems can be designed to assign direct and indirect costs to cost objects, such as products, services, and operating departments. It features an explicit and extensive treatment of capacity measurement and costing that sets the stage for the activity-based costing material that follows in subsequent chapters.
- Chapter 5 covers the measurement and management of product costs through the framework of time-driven activity-based costing. This recent innovation helps product costing to be done in a simple, transparent, accurate, and flexible manner. The chapter features the many ways managers can eliminate losses and improve product profitability once they understand the fundamental economics of their products and services.
- Chapter 6, measuring and managing customer relationships, is an entirely new chapter for the sixth edition. The chapter is new not only to the text but also to most management accounting courses. It features the strategic importance of understanding and transforming customer profitability through decisions on product features, product mix, order pricing, and customer relationships. Entirely new material in this chapter includes the pricing waterfall for measuring customer discounts, promotions, and allowances, and an extended treatment of how to derive customer satisfaction and loyalty metrics for a business unit's Balanced Scorecard.
- Chapter 7 features the role for management accounting information to drive strategy execution through enhanced continuous improvement activities, including lean management, kaizen costing, theory of constraints, cost of quality, six sigma, just-in-time, and benchmarking techniques. As in Chapter 6, new material illustrates how to derive process improvement performance measures for the organization's Balanced Scorecard.
- Chapter 8 introduces students to the total life-cycle costing concept. At the front end, the chapter shows how target costing can inform decisions made during the product design and development stages. Target costing helps companies to develop products that meet customers' functionality requirements at a cost that yields targeted profit margins. New material in the chapter introduces the breakeven time concept for measuring the performance of the product

development process, and the selection of other innovation metrics that companies can incorporate into their Balanced Scorecards. The chapter concludes by examining processes and metrics at the back end of the product life cycle, when consumers dispose of or return their used products.

- The sixth edition drops two topics, capital budgeting and financial ratio analysis, that our research shows are now usually covered in other courses. It retains and updates chapters from the fifth edition on the behavioral and organizational aspects of management accounting, budgeting, and financial and managerial control of decentralized operations.
- Also retained are the valuable HBS cases, first introduced in the fifth edition:
  * Sippican (A) and (B) (integrating time-driven activity-based costing, budgeting, and the Balanced Scorecard),
  * Midwest Office Products (time-driven ABC in a service setting),
  * Chadwick, Inc. (designing a Balanced Scorecard for a pharmaceutical company), and
  * Domestic Auto Parts (building a Balanced Scorecard).
- An additional HBS case is new to the sixth edition:
  * Citibank: Performance Evaluation (the costs and benefits of using multiple performance measures to evaluate performance).

All of these cases are brief for preparation ease and are accompanied by Instructor Case Notes found in the instructor resources.

- The sixth edition also retains the following Institute of Management Accountants cases:
  * How Mercedes-Benz used target costing to develop its new SUV and
  * Precision Systems, Inc.: Improving processes in order entry, with linkages to value-chain ideas (effects on customers, sales representatives, manufacturing, and other internal uses of the order entry information).
- ***Readings in Management Accounting*, Sixth Edition, by S. Mark Young**
  This supplement contains 53 recent and classic business press and academic articles that correlate with the chapter coverage in *Management Accounting*, Sixth Edition. Ideal for additional content reinforcement and for any case-based course, this supplement includes articles from a variety of sources to show the application of management accounting in diverse organizational settings.

Instructor Materials

The following supplements are available to adopting instructors. For detailed descriptions, please visit www.pearsoninternationaleditions.com/kaplan.

- **Instructor's Manual**—teaching tips and additional resources for each chapter.
- **Test Bank**—over 1,200 test questions.
- **Solutions Manual**—solutions for every question, exercise, problem, and HBS case study.
- **PowerPoint slides**—presentations for every chapter.

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The authors and product team would appreciate hearing from you! Let us know what you think about this book by writing to stephanie.wall@pearson.com. Please include "Feedback about AKMY 6e" in the subject line.

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About the Authors



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A professor in the School of Accountancy at the University of Waterloo, Anthony A. Atkinson received a bachelor of commerce and M.B.A. degrees from Queen's University in Kingston, Ontario, and M.S. and Ph.D. degrees in industrial administration from Carnegie-Mellon University in Pittsburgh. He is a fellow of the Society of Management Accountants of Canada and has written or coauthored two texts, various monographs, and more than 35 articles on performance measurement and costing. In 1989, the Canadian Academic Accounting Association awarded Atkinson the Haim Falk Prize for Distinguished Contribution to Accounting Thought for his monograph that studied transfer pricing practice in six Canadian companies. He has served on the editorial boards of two professional and five academic journals and is a past editor of the *Journal of Management Accounting Research*. Atkinson also served as a member of the Canadian government's Cost Standards Advisory Committee, for which he developed the costing principles it now requires of government contractors.



Robert S. Kaplan

Robert S. Kaplan is Baker Foundation Professor at the Harvard Business School, where he has taught for 27 years. Previously, he served on the faculty and as Dean of the Tepper Business School at Carnegie-Mellon University. Kaplan received a B.S. and M.S. in electrical engineering from M.I.T., and a Ph.D. in operations research from Cornell University.

Kaplan has done extensive writing, teaching, and consulting on linking cost and performance management systems to strategy implementation. He has helped to develop both activity-based costing and the Balanced Scorecard. His 14 books have been translated into 28 languages. Kaplan's most recent books are *The Execution Premium* with David Norton and *Time-Driven Activity-Based Costing* with Steven Anderson. He has also authored or coauthored 21 *Harvard Business Review* articles and more than 100 others in academic and professional journals.

Kaplan was inducted into the Accounting Hall of Fame in 2006 and received the Lifetime Contribution Award from the Management Accounting Section of the American Accounting Association in January 2006. In 2008, his coauthored book, *Relevance Lost: The Rise and Fall of Management Accounting*, received the AAA Seminal Contribution to Accounting Literature Award. His articles and books have also been recognized with several Wildman Medal and AAA Notable Contributions to Accounting Literature Awards.

Kaplan received the Outstanding Accounting Educator Award in 1988 from the American Accounting Association (AAA), the 1994 CIMA Award from the Chartered Institute of Management Accountants (UK) for "Outstanding Contributions to the Accountancy Profession," and the 2001 Distinguished Service Award from the Institute of Management Accountants (IMA) for contributions to the practice and academic community.



Ella Mae Matsumura

Ella Mae Matsumura is an associate professor in the Department of Accounting and Information Systems in the School of Business at the University of Wisconsin–Madison, and is affiliated with the university's Center for Quick Response Manufacturing. She received an A.B. in mathematics from the University of California, Berkeley, and M.Sc. and Ph.D. degrees from the University of British Columbia. Matsumura has won two teaching excellence awards at the University of Wisconsin–Madison and was elected as a lifetime fellow of the university's Teaching Academy, formed to promote effective teaching. She is a member of the university team awarded an IBM Total Quality Management Partnership grant to develop curriculum for total quality management education.

Professor Matsumura was a co-winner of the 2010 Notable Contributions to Management Accounting Literature Award. She has served in numerous leadership positions in the American Accounting Association (AAA). She was coeditor of *Accounting Horizons* and has chaired and served on numerous AAA committees. She has been secretary–treasurer and president of the AAA's Management Accounting Section. Her past and current research articles focus on decision making, performance evaluation, compensation, supply chain relationships, and sustainability. She coauthored a monograph on customer profitability analysis in credit unions.



S. Mark Young

S. Mark Young holds the George Bozanic and Holman G. Hurt Chair in Sports and Entertainment Business and is also professor of accounting and professor of management and organization at the Marshall School of Business, University of Southern California (USC), and professor of communication and journalism at the Annenberg School for Communication at USC. Professor Young received an A.B. from Oberlin College (economics) and a Ph.D. from the University of Pittsburgh.

Professor Young has published research in a variety of journals including *The Accounting Review*, *Accounting, Organizations and Society*, the *Journal of Accounting Research*, the *Journal of Marketing Research*, and *Contemporary Accounting Research*. Currently, he is on the editorial board of several major journals and was past associate editor for *The Accounting Review*. In 2006, he was a co-winner of the Notable Contribution to the Accounting Literature (with Shannon Anderson) and has won the Notable Contributions to the Management Accounting Literature Award twice—with Frank Selto (1994) and Shannon Anderson (2003). He also received the Jim Bulloch Award for Innovations in Management Accounting Education in 2005. Dr. Young has extensive executive teaching and consulting experience. He has won several outstanding teaching awards including the Golden Apple Teaching Award and is a distinguished fellow of the Center for Excellence in Teaching at USC.

Professor Young also studies the entertainment industry and his book, *The Mirror Effect: How Celebrity Narcissism Is Seducing America* (with Dr. Drew Pinsky) is a *New York Times* bestseller. He also comments regularly in the media and has appeared on *The View*, *Howard Stern*, *Fox & Friends*, and CNN's *Situation Room* and has been quoted in the *New York Times*, *Newsweek*, *China Daily*, *Psychology Today*, *Scientific American Mind*, and the *London Times*.

Chapter 1

How Management Accounting Information Supports Decision Making

After completing this chapter, you will be able to:

1. Understand the major differences between financial and management accounting.
2. Appreciate the historical evolution of management accounting to its present set of practices.
3. Understand how management accounting information is used for strategic and operational decision making.
4. Understand the steps of the plan–do–check–act cycle and how each step defines a unique purpose and role for management accounting information.
5. Be sensitive to the behavioral consequences that result from the introduction of new measurement and management systems.

Research in Motion

In September 2010 Research in Motion (RIM), the producer of the BlackBerry smart phone, announced that PlayBook, its entry into the hot tablet market, would be introduced in the first quarter of 2011. This announcement caused a 3% decline in the value of RIM's shares, which analysts attributed to disappointment that the PlayBook would not be available for the December holiday season as previously expected.

RIM, once a smart phone market leader, was experiencing intense competition. Despite the extraordinary success of its BlackBerry products in the business market segment, new competitors such as Apple's iPhone, which had been developed originally for the consumer market segment, had eroded RIM's market leadership position. Apple's latest hot product, the iPad tablet, had achieved extraordinary success since its launch in March 2010 and RIM was under huge market pressure to respond with its own tablet.



Alamy Images

The situation RIM faced in 2010 vividly illustrates the nature of both corporate strategy (choosing the markets in which it will compete) and business unit strategy (choosing how to compete in a given market segment). The strategic decisions that RIM faced required relevant and timely information, much of which is supplied by management accounting information.

What Is Management Accounting?

Management accounting is the process of supplying the managers and employees in an organization with relevant information, both financial and nonfinancial, for making decisions, allocating resources, and monitoring, evaluating, and rewarding performance. The reported expense of an operating department, such as the assembly department of an automobile plant or an electronics company, is one example of management accounting information. Other examples are the cost of producing a product, the cost of delivering a service, and the cost of performing an activity or business process, such as creating a customer invoice or serving a customer. Nonfinancial management accounting information includes measures related to customer satisfaction and loyalty, process quality and timeliness, innovation, and employee motivation.

Management Accounting and Financial Accounting

Most students study management accounting after taking an initial course in financial accounting. These two subjects share important similarities since both are based on financial information and other quantitative information about business operations. But they differ in important ways.

Financial accounting has the following attributes:

1. It is retrospective, reporting and summarizing in financial terms the results of past decisions and transactions.
2. It is primarily oriented to external stakeholders, such as investors, creditors, regulators, and tax authorities.
3. It must be consistent with rules formulated by standard setters such as the Financial Accounting Standards Board (FASB) in the United States and the International Accounting Standards Board (IASB) for much of the rest of the world, and local country regulatory authorities, such as the U.S. Securities and Exchange Commission (SEC). These standard setters and regulatory authorities specify the content of the reports, the rules for how the content gets developed, and how the content will be presented.

In contrast, management accounting information has the following attributes:

1. It is both retrospective, providing feedback about past operations, and also prospective, incorporating forecasts and estimates about future events. For both retrospective reporting and prospective planning, management accounting uses both financial and nonfinancial measures.
2. It is oriented to meeting the decision-making needs of employees and managers inside the organization. Ideally, a good management accounting system can become a source of competitive advantage for a company.
3. It has no prescribed form or rules about its content, how the content is to be developed, and how the content is to be presented. All of these get determined by managers' judgments and decisions about what best meets their needs for actionable information and is defined entirely by the needs of managers using the information. No standard setter or regulator specifically influences the design of management accounting information and systems.

Management accounting information must be relevant and helpful to managers, and customized to serve multiple purposes.

A Brief History of Management Accounting

In the early 19th century, management accounting consisted of systems to measure the cost of producing individual products, such as a piece of clothing or a weapon. As enterprises grew in scale and scope, the demands for accurate costing information increased. By the middle of the 19th century, railroad managers had implemented large, complex costing systems that allowed them to compute the costs of carrying different types of freight, such as coal and steel, along multiple routes. This information supported efficiency improvements and pricing decisions. The railroads were the first modern industry to develop and use large quantities of financial statistics to assess and monitor organizational performance. Later in the century, Andrew Carnegie, in his steel company, developed detailed systems to record the cost of materials and labor used in his various mills. Carnegie intensively studied and acted on the information from his systems to continually reduce costs in his mills, and to close mills that he felt were irretrievably inefficient. Carnegie exploited his cost advantage by lowering his prices to levels that competitors could not match if they wanted to stay in business. Thus, Carnegie's excellent costing systems gave him a sustainable competitive advantage in the marketplace and promoted the growth and success of his company.

In the early 20th century, companies, such as DuPont and General Motors, expanded the focus of management accounting beyond cost accounting to management planning and control. These large companies replaced market mechanisms with

internal resource allocation to multiple lines of business. Executives needed information, such as return-on-investment by business unit, for coordination and control among these multiple businesses. They used management accounting information to empower and inform the visible hand of management to replace what Adam Smith called the invisible hand of market forces.[1]

These organizations sought to improve efficiency and therefore profitability by internalizing what were previously open market transactions and eliminating the costs of transacting with external agents. The rise of these integrated companies created a demand for measuring the performance of individual organizational units to evaluate their performance through comparisons with stand-alone organizations that performed the same task. For example, an automobile company might want to compare the cost performance of a division that makes transmissions with that of an independent supplier, an application that we discuss in Chapter 3. Managers developed ways to measure the profitability and the performance of their units and continue to use them today, as discussed in Chapter 11 of the book.

After these innovations, the evolution of management accounting practice slowed as senior management interest focused on developing and preparing external financial statements that complied with the new reporting and auditing requirements imposed by regulatory authorities in the 1930s. Only in the 1970s, when American and European companies were under intense pressure from Japanese manufacturers, did interest revive in developing new management accounting tools. These tools included systems that reported on quality, service, and customer and employee performance rather than simple financial summaries of organizational unit performance. Also, major advances were made in measuring the cost of products and services to reflect the increasing importance of indirect and support costs required to design and produce a product, deliver a service, and meet a customer's demands. This text features, and in fact is organized around, many recent innovations in cost, profit, and performance measurement systems.

In summary, the history of management accounting illustrates that innovations in management accounting practice were—and continue to be—driven by the information needs of new strategies as companies became more complex, technologies changed, and new competitors appeared. When controlling and reducing costs were important, innovations in costing systems occurred. When organizations gained advantage from scale and diversification, innovative executives developed new management control systems to monitor and manage their complex enterprises. When competitive advantage shifted to how well a company deployed and managed its intangible assets—customer relationships, process quality, innovation, and, especially, employees, new systems for cost and performance management emerged.

IN PRACTICE

Definition of Management Accounting (2008), Issued by the Institute of Management Accountants

Management accounting is a profession that involves partnering in management decision making, devising planning and performance management systems, and providing expertise in financial reporting and control to assist management in the formulation and implementation of an organization's strategy.

Source: "Definition of Management Accounting," one of a series of Statements on Management Accounting, published by the *Institute of Management Accountants*, 2008, accessed from http://www.imanet.org/PDFs/Secure/Member/SMA/SMA_DefinManAcct_0408_2.pdf, which may be limited to IMA members.

[1] Alfred DuPont Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, Mass.: Belknap Press, 1977).

The Gap operates retail outlets, such as Banana Republic, Gap, and Old Navy, that target different market segments. Each market segment addresses different customers so the managers in each of the Gap's operating units need different management accounting information to evaluate their performance.

Getty Images, Inc.—Getty News



Strategy

This book frames management accounting as a discipline that helps an enterprise to develop and implement its strategy. Of course, this also requires that strategic objectives be linked to reporting on and improving operations.

Strategy is about an organization making choices about what it will do and, equally important, about what it will not do. At the highest level strategic planning involves choosing a strategy that provides the best fit between the organization's environment and its internal resources in order to achieve the organization's objectives. Selecting a strategy forces managers to make choices about what markets the organization should target and how the organization will compete in those markets. The details about how to do strategic planning and the type of information and analysis that strategists use to select a particular strategy are covered in strategy courses. But once a strategy has been selected, the organization needs management accounting information to help implement the strategy, allocate resources for the strategy, communicate the strategy, and link employees and operational processes to achieve the strategy. As the strategy gets executed, management accounting information provides feedback about where it is working and where it is not, and guides actions to improve the performance from the strategy. We can view the iterative strategy execution process through the lens of the **plan–do–check–act cycle**, originally developed for improving the quality of products and processes (see Exhibit 1-1).