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北大光华管理学院 IMBA、MBA 推荐用书

汤姆森学习出版集团精选教材系列

# 管理会计

Management  
Accounting

第 6 版

*Don R. Hansen*

Oklahoma State University

*Maryanne M. Mowen*

Oklahoma State University / 著



北京大学出版社  
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会计类

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## · 院长寄语 ·

北京大学光华管理学院秉承北大悠久的人文传统、深邃的学术思想和深厚的文化底蕴,经过多年努力,目前已经站在中国经济发展与企业管理研究的前列,以向社会提供具有国际水准的管理教育为己任,并致力于帮助国有企业、混合所有制企业和民营企业实现经营管理的现代化,以适应经济全球化趋势。

光华 MBA 项目旨在为那些有才华的学员提供国际水准的管理教育,为工商界培养熟悉现代管理理念、原理和技巧的高级经营管理人才,使我们的 MBA 项目成为企业发展致富之源,为学员创造迅速成长和充分发挥优势的条件和机会。

为了适应现代人才需求模式和建立中国的一流商学院,北京大学光华管理学院正在推出国际 MBA“双语双学位”培养方案;同时,为了配合北大 MBA 教育工作的展开,光华管理学院与北大出版社联合推出本套《当代全美 MBA 经典教材书系(英文影印版)》,并向国内各兄弟院校及工商界人士推荐本套丛书。相信我们这些尝试将会得到社会的支持。而社会对我们的支持,一定会使光华 MBA 项目越办越好,越办越有特色。

北京大学光华管理学院院长

陈以寿

10.08.30

## 出版者序言

2001年12月10日中国加入了世界贸易组织,从此,中国将进一步加大与世界各国的政治、经济、文化各方面的交流和合作,这一切都注定中国将在未来世界经济发展中书写重要的一笔。

然而,中国经济的发展正面临着前所未有的人才考验,在许多领域都面临着人才匮乏的现象,特别是了解国际贸易规则、能够适应国际竞争需要的国际管理人才,更是中国在未来国际竞争中所必需的人才。因此,制定和实施人才战略,培养并造就大批优秀人才,是我们在新一轮国际竞争中赢得主动的关键。

工商管理硕士(MBA),1910年首创于美国哈佛大学,随后MBA历经百年风雨不断完善,取得了令世人瞩目的成绩。如今,美国MBA教育已经为世界企业界所熟知,受到社会的广泛承认和高度评价。中国的MBA教育虽起步较晚,但在过去10年里,中国的MBA教育事业发展非常迅速,也取得了相当显著的成绩。现在国内已经有50多所高等院校可以授予MBA学位,为社会培养了3000多名MBA毕业生,并有在读学员2万多人。

目前,国内的MBA教育市场呈现一片繁荣景象,但繁荣的背后却隐藏着种种亟待解决的问题。其中很大一部分问题的成因是因为目前我国高校使用的教材内容陈旧,与国外名校的名牌教材差距较大,在教学内容、体系上也缺乏与一流大学的沟通。为适应经济全球化,国家教育管理部门曾要求各高校大力推广使用外语讲授公共课和专业课,特别是在我国加入WTO后急需的上百万人才中,对MBA人员的需求更是占1/3之多,所以,大力开展双语教学,适当引进和借鉴国外名牌大学的原版教材,是加快中国MBA教育步伐,使之走向国际化的一条捷径。

目前,国内市场上国外引进版教材也是新旧好坏参差不齐,这就需要读者进行仔细的甄别。对于国外原版教材的使用,在这里我们要提几点看法。国外每年出版的教材多达几万种,如果不了解国外的教材市场,不了解国外原版教材的品质就可能找不到真正适合教学和学习的好的教材。对于不太了解外版教材的国内读者来说,选择教材要把握以下几点,即:选择国外最新出版的书;选择名校、名作者的书;选择再版多次并且非常流行的书。综合以上几点来看,目前国内市场上真正出新、出好、出精的MBA教材还是不多的。基于以上认识,北京大学出版社推出了《当代全美MBA经典教材书系(英文影印版)》,本套丛书的筛选正是本着以上提到的几点原则,即:出新、出好、出精。经过北京大学及国内其他著名高校的知名学者的精心挑选,本套丛书汇集了美国管理学界各个学科领域专家的权威巨著,称得上是一套优中选精的丛书。本套丛书现在已经推出了MBA主干课程、会计专业、金融专业课程教程三个系列,共45个品种。以后,我们还将陆续推出更多专业的英文影印版书籍。

### 致谢

本套教材是我社与国外一流专业出版公司合作出版的,是从大量外版教材中选出的最优秀的一部分。在选书的过程中我们得到了很多专家学者的支持和帮助,可以说每一本书都经过处于教学一线的专家、学者们的精心审定,本套英文影印版教材的顺利出版离不开他们的无私帮助,在此,我们对审读并对本套图书提出过宝贵意见的老师们表示衷心的感谢,他们是(按拼音排序):

北京大学光华管理学院:符国群、李东、刘力、梁钧平、陆正飞、王建国、王立彦、王其文、  
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本套丛书的顺利出版还得到了培生教育集团(Pearson Education)北京代表处、汤姆森学习出版集团(Thomson Learning)北京代表处的大力支持,在此对他们也表示真诚的感谢。

## 出版声明

本套丛书是对国外原版教材的直接影印,由于各个国家政治、经济、文化背景的不同,原作者所持观点还请广大读者在阅读过程中加以分析和鉴别。我们希望本套丛书的出版能够促进中外文化交流,加快国内经济管理专业教学的发展,为中国经济走向世界做出一份贡献。

我们欢迎所有关心中国 MBA 教育的专家学者对我们的工作进行指导,欢迎每一位读者给我们提出宝贵的意见和建议。

北京大学出版社政经法编辑部

2003 年 1 月



# 关于本书

## 适用对象

适用于大学二至四年级学生的管理会计课程,也适用于研究生课程。

## 内容简介

《管理会计》(第6版)部分覆盖了运用型的管理课题(例如,工作订单和处理成本)和基于行为基础的管理课题(例如,战略成本分析、基于行为的战略决策、生产力的度量和控制、质量成本管理、约束理论、处理价值分析和国际课题)。这种方法强调了变化的环境经常要求一个变化的成本管理系统。

## 作者简介

**Don R. Hansen** 博士是 Oklahoma State University 的会计学教授。他于 1977 年从 the University of Arizona 获取博士学位;从 Brigham Young University 获取数学学士学位。他的研究兴趣有以活动为基础的成本核算和数学建模方法。他已经在会计学和工程学杂志上发表很多文章,其中有《会计学评论》、《管理会计研究》、《会计范围》和《IIE 交易》。他还为《会计学评论》的编委会工作。

**Maryanne M. Mowen** 博士是 Oklahoma State University 的会计学副教授。她于 1979 年从 Arizona State University 获取博士学位。Mowen 博士善于从跨学科的角度讲授和编写成本会计,她获得过历史和经济学学位。同时,她在行为决策理论上也有研究,曾在《决策科学》、《经济学和心理学》、《管理会计研究》等杂志上发表文章。

## 关键特色

**国际化覆盖:**强调国际问题的重要性,第6版提供了一整章来阐述这个话题(第14章)并且用了许多例子贯穿全文来做阐释。

**完整地覆盖了现代和传统的主题:**新成本技术主题(ABC和JIT)与更传统的主题(如生产成本管理系统)一起产生。这帮助学生看到了传统的ABC成本管理系统的优点和不足之处。

**扩展的教辅支持:**合作式的学习指导提供了许多教学提示和建议以使课堂更加互动,与学生一起来揭示会计的秘密。

**真正开放的世界案例:**在每章的开头都有关于世界形势和公司的案例。这些案例展示了公司怎么处理书中提出的问题并且向学生揭示了与他们先前学的知识之间的关系。

**真正的世界品位:**真实的公司和情境贯穿全书。在每章的末尾材料和正文中都有真实的公司和情境的案例。

**在线辅导:**学生可以在 Hansen 和 Mowen 的个人主页(<http://Hansen.swcollege.com>)上得到逐章的辅导,该主页强调了第6版中的关键概念。在线辅导提供了即时反馈,提供了正确和错误答案的即时解释(为什么这种错误答案是错的! )。

**电子表格的联合使用:**关键的管理技术(如回归)在电子表格的使用中作了详细阐述,而不是

烦琐的手工的计算。这是工业实践的更深层次的反映。

战略成本管理概念的整合:贯穿了第2和第3部分,战略成本管理技术(如预算、ABM和分权)用合适的方法整合了起来。

### 本版更新

电子商务:关于电子商务更新的部分已经被加入到第1章,让学生对电子商务对管理会计问题的影响有一个总的概览。

用手工计算的最小平方回归法被加入到文中:手工计算回归系数被加入到第3章,以帮助学生理解暗含在普通最小平方回归分析法中的技术和理论概念。

预算覆盖面已被简化:一个新的更简单的例子被应用到第8章,以阐释预算的概念。

章节假设已被更新:每一章开头的案例都聚焦于现实世界中的情境和公司。这些案例展示了公司怎么处理书中所提出的问题,并且向学生揭示了与他们所学过的前面内容之间的关系。

ABC成本覆盖管理方法的延伸:JIT方法被移到第19章,同时基于行为的供应成本问题也被加入书中。于是这一章现在有了更强大的基于行为基础的成本中心。

更新的环境会计章节:这一章讲述了环境会计中凸现出来的领域。本章还介绍了新的现实世界中的例子来强调生存能力和绿色成本管理的价值。

### 网址

<http://hansen.swcollege.com>

### 简要目录

1. 导论:管理会计的角色、历史和发展方向

第一部分:成本的累计和产品成本的计算

2. 基础管理会计概念

3. 活动花费的行为

4. 以活动为基础的会计

5. 工作订单成本计算

6. 加工成本

7. 支持部门成本分摊

第二部分:计划和控制

8. 以功能为基础的预算和以活动为基础的预算

9. 标准成本计算:一种管理控制工具

10. 以活动为基础和以战略为基础的责任会计

11. 质量成本和生产率:测量、报告和控制

12. 环境成本管理

13. 在分散公司中的实施价值

14. 管理会计中的国际问题

第三部分:管理决策制定

15. 分割报告和实施估计

16. 本—量—利分析:一种管理计划工具

17. 战术决策

18. 资本投资决策

19. 存货管理

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6. 题库 / 0324126735

7. Web Tutor Advantage On BlackBoard

8. Web Tutor Advantage On WebCT

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# Preface

The sixth edition of *Management Accounting* introduces students to the fundamentals of management accounting. Though it is assumed that students have been introduced to the basics of financial accounting, extensive knowledge of financial accounting is not needed. Our emphasis is on the use of accounting information. Thus, the text should be of value to students with a variety of backgrounds. Although written to serve undergraduates, the text has been used successfully at the graduate level. There is sufficient variety in the assignment material to accommodate both undergraduate and graduate students.

Many business school students who are required to take a course in management accounting are not accounting majors. For these students, it is often difficult to appreciate the value of the concepts being taught. *Management Accounting*, 6e, overcomes this attitude by using introductory chapter scenarios based on real-world settings, photos illustrating practical applications of management accounting concepts, and realistic examples illustrating the concepts within the chapters. Seeing that effective management requires a sound understanding of how to use accounting information should pique the interests of both accounting and nonaccounting majors.

## Activity-Based Management

Management accounting continues to evolve and respond to changes in the manufacturing and service sectors of today's business world. One significant response has been the development of activity-based management. The effect of the activity-based management model on management accounting has been dramatic. The widespread acceptance and practice of activity concepts demands treatment of activity-based methods in an integrated, comprehensive framework. To respond to this need, we have developed such a framework. Within this framework, we offer extensive coverage of such topics as activity-based costing, kaizen costing, Balanced Scorecard, environmental cost management, activity-based budgeting, process value analysis, quality, productivity, life-cycle cost management, target costing, and international management accounting issues.

## Functional-Based Management

To provide balance, the sixth edition continues to offer extensive coverage of traditional topics. There is still widespread usage of costing models that rely on production functions and control models that focus on functional organizational units. Covering these functional-based models is essential not just because they are used, but because the significant differences between the activity-based and functional-based approaches can be brought to light. This helps students determine when it is appropriate to use the different approaches. This coverage also exposes the limitations of functional-based costing and control and highlights the advantages of activity-based costing and control. The understanding that comes from the integrated approach of this text should help future managers bring about change when it is merited. Furthermore, perhaps realizing that management accounting is not a static discipline will itself contribute to additional innovative developments.

Take a few minutes to review the table of contents. You will see a balanced, integrative presentation of the activity-based and functional-based management accounting concepts.

## Organization of the Text

The sequence of chapters follows that of the fifth edition. This presentation is used to facilitate integration of the activity-based concepts throughout the text. Changes to specific chapters are listed below.

**All Chapters:** Multiple-choice exercises have been added to each chapter. Approximately 40 percent of the exercises and problems have been changed.

**Chapter 1:** The brief scenarios at the beginning of the chapter have been updated and a brief section on e-commerce has been added.

**Chapter 2:** A new opening scenario has been added.

**Chapter 3:** Manual computation of regression coefficients is added to help students understand the technical and theoretical concepts underlying ordinary least squares analysis.

**Chapter 4:** Coverage of JIT material is moved to another chapter, and coverage of activity-based supplier costing is added. The chapter now has a much stronger activity-based costing focus. The opening scenario is updated to better reflect the more exclusive coverage of activity-based concepts.

**Chapter 8:** A new and simpler example is used throughout the chapter to illustrate the budgeting concepts.

**Chapter 10:** A new opening scenario has been added.

**Chapter 12:** New real-world examples have been introduced to emphasize the viability and value of environmental cost management.

**Chapter 19:** A new opening scenario has been added. Also, much of the JIT material previously in Chapter 4 has been moved to and integrated within this chapter.



## CHAPTER 9

### Standard Costing: A Managerial Control Tool

#### Learning Objectives

After studying this chapter, you should be able to:

1. Tell how unit standards are set and why standard costing systems are adopted.
2. State the purpose of a standard cost sheet.
3. Describe the basic concepts underlying variance analysis, and explain when variances should be investigated.
4. Compute the materials and labor variances, and explain how they are used for control.
5. Calculate the variable and fixed overhead variances, and give their definitions.
6. Appendix: Prepare journal entries for materials and labor variances, and show how to account for overhead variances.

#### Scenario

Millie Anderson, manager of Honey Medical's IV Products Division, was more than satisfied with her division's performance last year. At the start of the year, the division had introduced a new line of polyurethane catheters, replacing the old teflon catheters, and sales had more than tripled. The market reaction to the new catheter was a virtual replay of the company's history: Honey Medical was establishing a dominant position in the IV market.

Nearly 30 years ago, Lindell Honey, the founder of Honey Medical, had perceived the need for something other than a metal needle for long-term insertion into veins. Metal needles were irritating and could damage the vein. Based on this, Honey had developed a catheter using teflon, a lubricated plastic that was easy to insert into the vein. The development was well received by the medical community and pro-

duced a new and successful company, one with expanded activities into a variety of medical products.

For years, the new technology allowed Honey to dominate the market. But when the patent expired, other companies entered the market with their own catheters, increasing competition. Prices had been driven down, and profit margins were eroding.

The falling profit margins had prompted Millie and other high-level managers to examine the continued viability of the teflon catheters. After many years, the medical profession had noted that after 24 hours of use, an infection tended to develop around the point of insertion. Researchers at Honey Medical had discovered that the problem was one of incompatibility of the blood and tissue with the teflon. Further studies showed that different plastics produced different reactions. Research was immediately begun to search for a material that was more biocompatible than teflon. The outcome was polyurethane catheters. The new catheter could be left in for 72 hours, compared to the 24 hours for teflon catheters.

Millie also knew that history would repeat itself in the latter stages—the time would come when other firms would produce catheters with the same degree of biocompatibility. In fact, Honey's research scientists estimated that competitors would have a compelling catheter on the market within three years. This time, however, Millie was determined to protect the division's market share. Since most patients had little need for a catheter beyond 72 hours, further improvements in biocompatibility were not likely to yield the same market benefits as in

the past. Price competition would become more important. Competing on price meant that cost control would become critical. In the past, because of its dominant position, the division had not been too concerned with manufacturing costs. By implementing cost control measures now, she believed that the division could better compete on price when competition resurfaced in a few years. She consulted with Fred McCourt, division controller, in the following conversation.

**Millie:** "Fred, is our budgetary system the only attempt we make to control manufacturing costs?"

**Fred:** "Yes. But it really isn't a very good effort. Budgets are based on last year's costs plus some allowance for inflation. We have never tried to identify what the costs ought to be. Nor have we held managers responsible for cost control. Our profitability has always been good and resources plentiful. My guess is that we spend more than necessary simply because we have been so successful."

**Millie:** "Well, resources wouldn't be so plentiful now if we hadn't developed the polyurethane catheter. And I'm afraid that resources won't be plentiful in the future unless we take action now to control our manufacturing costs. If we can be more profitable now by using better cost control, we ought to use it. I want my plant and production managers to recognize their responsibilities in this area. Any suggestions?"

**Fred:** "We need to inject more formality into the budgetary system. First, budgets should reflect what costs should be, not what they have been. Second, we can encourage managers to be cost conscious by

having them help identify efficient levels of cost on which the budget will be based and tying bonuses and promotions into the system. However, I think we can gain cost control by going one step further and establishing a standard cost system."

**Millie:** "Doesn't that entail the specification of unit price and quantity standards for materials and labor?"

**Fred:** "That's essentially correct. Using the unit price and quantity standards, budgeted costs for labor, materials, and overhead are established for each unit produced. The standards are based on efficiency expectations and we demand less resource usage than our traditional incremental budgetary approach. The unit price and quantity standards are used to develop budgets and, once actual costs are in, to break down the budgetary variances into price and efficiency variances. A standard cost system provides more detailed control information than a budgetary system using normal costing. We can hold our managers responsible for meeting the established standards."

**Millie:** "I think our division needs this type of system. It's about time that our managers become cost conscious."

#### Questions to Think About

1. What was motivating Millie to implement a more formal cost control system?
2. Why does a standard cost system provide more detailed control information?
3. What type of control is being exercised with the use of standards?
4. How can standards be used to control costs?

## Chapter Organization and Structure

Each chapter is carefully structured to help students focus on important concepts and retain them. Components found in each chapter include:

**Learning Objectives.** Each chapter begins with a set of learning objectives to guide students in their study of the chapter. These objectives outline the organizational flow of the chapter and serve as points of comprehension and evaluation. Learning objectives are tied to specific sections of topic coverage within the chapter. They are repeated in the margin at the beginning of the corresponding chapter coverage and are summarized at the end of the chapter. (see pages 2, 110, and 378)

**Summary of Learning Objectives.** Each chapter concludes with a comprehensive summary of the learning objectives. Students can review and test their knowledge of key concepts and evaluate their ability to complete chapter objectives. (see pages 20 and 258)

**Scenario.** An interesting, real-world scenario opens each chapter. The scenario ties directly to concepts covered in the chapter and helps students relate chapter topics to actual business happenings. "Questions to Think About," critical-thinking questions that appear at the end of each scenario, are designed to pique student interest in the chapter and stimulate class discussion. (see pages 2, 32, and 378)

**Key Terms.** Throughout each chapter, key terms are highlighted in color for quick identification. A list of key terms, with page references, is presented at the end of each chapter to provide additional reinforcement. All key terms are defined in a comprehensive glossary at the end of the text. (see pages 135 and 414)

**Review Problems.** Each chapter contains at least one review problem with the accompanying solution provided. These review problems demonstrate the application of major concepts and procedures covered in the chapter. (see pages 51, 136, and 259)

### Summary of Learning Objectives

1. Discuss the importance of unit costs. Unit costs are important for inventory valuation, income determination, and providing input to a variety of decisions such as pricing, making or buying, and accepting or rejecting special orders. Because of their importance, their accuracy becomes a critical issue.

2. Describe functional-based costing approaches. Functional-based costing assigns direct materials and direct labor using direct tracing; overhead is assigned using a two-stage process. In the first stage, overhead costs are collected in pools, either at the plant level or the departmental level. Once the pools are defined, the costs of the overhead pools are assigned to products using unit-level drivers, the most common being direct labor hours.

3. Tell why functional-based costing approaches may produce distorted costs.

Overhead costs have increased in significance over time and in many firms represent a much higher percentage of product costs than direct labor. At the same time, many overhead activities are unrelated to the units produced. Functional-based costing systems are not able to assign the costs of these nonunit-related overhead activities properly. These overhead activities are consumed by products in different proportions than unit-based overhead activities. Because of this, assigning overhead using only unit-based drivers can distort product costs. This can be a serious matter if the nonunit-based overhead costs are a significant proportion of total overhead costs.

4. Explain how an activity-based costing system works for product costing.

Activities are identified and defined through the use of interviews and surveys. This information allows an activity dictionary to be constructed. The activity dictionary lists activities and potential activity drivers, classifies activities as primary or secondary, and provides any other attributes deemed to be important. Resource costs are assigned to activities by using direct tracing and resource drivers. The costs of secondary activities are ultimately assigned to primary activities

using activity drivers. Finally, the costs of primary activities are assigned to products, customers, and other cost objects. Thus, the cost assignment process is described by the following general steps: (1) identifying the major activities and building an activity dictionary, (2) determining the cost of those activities, (3) identifying a measure of consumption for activity costs (activity drivers), (4) calculating an activity rate, (5) measuring the demands placed on activities by each product, and (6) calculating product costs.

5. Provide a detailed description of how activities can be grouped into homogeneous sets to reduce the number of activity rates.

Homogeneous sets of activities are collections of activities that have the same activity level and activity driver classifications. Classifying by level places activities into one of four categories: unit level, batch level, product level, or facility level. Unit-level activities occur each time that a unit of product is produced. Batch-level activities occur when batches of products are produced. Product-level activities are incurred to enable production of each different type of product. Facility-level activities sustain a facility's general manufacturing processes. Finally, level-classified activities with the same consumption ratio are combined to form homogeneous sets. Summing the costs associated with activities within homogeneous sets defines homogeneous cost pools. An activity driver for one of the activities in the set is chosen to compute pool rates and assign costs to individual products.

6. Describe activity-based customer and supplier costing.

Tracing customer-driven costs to customers can provide significant information to managers. Accurate customer costs allow managers to make better pricing decisions, customer-mix decisions, and other customer-related decisions that improve profitability. Similarly, tracing supplier-driven costs to suppliers can enable managers to choose the true low-cost suppliers, providing a stronger competitive position and increased profitability.

### Key Terms

Activity attributes, 121  
Activity-based costing (ABC) system, 122

Activity dictionary, 122  
Activity drivers, 119  
Actual costing, 113

Applied overhead, 114  
Batch-level activities, 119  
Consumption ratio, 119

Fixed cost, 68  
Flexible resources, 74  
Goodness of fit, 89  
High-low method, 82  
Independent variable, 82  
Intercept parameter, 82  
Long run, 72  
Method of least squares, 87  
Mixed cost, 70  
Multiple regression, 91  
Practical capacity, 74  
Relevant range, 68  
Scattergraph, 81  
Scatterplot method, 83  
Short run, 72  
Slope parameter, 82  
Step cost, 76  
Variable activity rate, 78  
Variable cost, 64

### Review Problems

#### 1. Resource Usage and Cost Behavior

Kaylin Manufacturing Company has three related accounts payable clerks responsible for processing purchase invoices. Each clerk is paid a salary of \$10,000 and is capable of processing 1,000 invoices per year (working efficiently). In addition to the salaries, Kaylin spends \$9,000 per year for forms, postage, checks, and so on (assuming 15,000 invoices are processed). During the year, 12,500 invoices were processed.

#### Required

- Calculate the activity rate for the purchase order activity. Break the activity into fixed and variable components.
- Compute the total activity availability, and break this into activity usage and unused activity.
- Calculate the total cost of resources supplied, and break this into activity usage and unused activity.

#### Solution

- Activity rate =  $(\$3 \times \$10,000) + \$9,000 / 15,000$   
= \$6.60 per invoice  
Fixed activity rate =  $\$90,000 / 15,000$  = \$6.00 per invoice  
Variable activity rate =  $\$9,000 / 15,000$  = \$0.60 per invoice
- Activity availability = Activity usage + Unused activity  
15,000 invoices = 12,500 invoices + 2,500 invoices
- Cost of resources supplied = Cost of activity used + Cost of unused activity  
 $\$90,000 + (\$0.60 \times 12,500) = (\$6.60 \times 12,500) + (\$6.00 \times 2,500)$   
 $\$97,500 = \$82,500 + \$15,000$

#### 2. High-Low and Least Squares Methods

Kim Wilson, controller for Max Enterprises, has decided to estimate the fixed and variable components associated with the company's shipping activity. She has collected the following data for the past six months:

Packages Shipped	Total Shipping Costs
10	\$ 800
20	1,100
15	900
12	900
18	1,050
25	1,250



### Questions for Writing and Discussion

1. Explain why knowing the unit cost of a product or service is important.
2. What is cost measurement? Cost assignment? What is the difference between the two?
3. Explain why an actual overhead rate is rarely used for product costing.
4. Describe the two-stage process associated with plantwide overhead rates.
5. Describe the two-stage process for departmental overhead rates.
6. Explain why departmental rates might be chosen over plantwide rates.
7. Explain how a plantwide overhead rate, using a unit-level cost driver, can produce distorted product costs. In your answer, identify two major factors that impact the ability of plantwide rates to assign cost accurately.
8. Explain how low-volume products can be undercosted and high-volume products overcosted if only unit-level cost drivers are used to assign overhead costs.
9. Explain how undercosting low-volume products and overcosting high-volume products can affect the competitive position of a firm.
10. What are nonunit-level overhead activities? Nonunit-level cost drivers? Give some examples.
11. What is meant by "product diversity"?
12. What is an overhead consumption ratio?
13. Explain how departmental overhead rates can produce product costs that are more distorted than those computed using a plantwide rate.
14. Overhead costs are the source of product cost distortions. Do you agree or disagree? Explain.
15. What is activity-based product costing?
16. What is an activity dictionary?
17. What is the difference between primary and secondary activities?
18. Explain how costs are assigned to activities.
19. Explain how homogeneous sets of activities are produced. Why are they produced?
20. What is a homogeneous cost pool?
21. What are unit-level activities? Batch-level activities? Product-level activities? Facility-level activities?
22. Why might ABC be useful in a company with only one product? With 101 manufacturing?
23. Describe the value of activity-based customer costing.
24. Explain how activity-based costing can help a firm identify its true low-cost suppliers.

### Exercises

Nobles Company produces all hours. At the beginning of the year, the cost manager estimated that overhead costs would be \$2,912,000 and that the units produced would be 300,000. Actual data concerning production for the past year follow:

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Units produced	100,000	40,000	20,000	140,000	300,000
Prime costs	\$2,000,000	\$800,000	\$400,000	\$2,800,000	\$6,000,000
Overhead costs	\$500,000	\$600,000	\$900,000	\$700,000	\$3,000,000

#### Required

1. Calculate the unit cost for each quarter and for the year using the following costs:
  - a. Actual prime costs
  - b. Actual overhead costs
  - c. Actual total manufacturing costs
2. What do the calculations in Requirement 1 tell you about actual costing?
3. Using supporting calculations, describe how actual costing would work.

**Stully Manufacturing** uses a normal costing system. Budgeted overhead for the coming year is \$4,500,000. Expected actual activity is 1,200,000 direct labor hours. During the year, Stully worked a total of 1,132,000 direct labor hours, and actual overhead totaled \$4,200,000.

#### Required

1. Compute the predetermined overhead rate for Stully Manufacturing.
2. Compute the applied overhead.

4-1  
Normal versus Actual Costing  
LO1

4-2  
Plantwide versus Overhead Variance  
LO1, LO2

Chapter 10: Activity-Based Costing 139

10-22  
Cybercase  
LO4

### Research Assignment

The Government Performance and Results Act of 1993 requires all federal agencies to establish strategic plans and develop methods for measuring the performance of the strategic initiatives. In other words, federal agencies must implement a strategic-based responsibility accounting system. One possibility that is being explored for satisfying this mandate is the use of the *Balanced Scorecard*. This strategic management approach has been successfully used in the private sector. However, in governmental settings, outcomes are based on mission success rather than financial success. This fundamental difference creates a number of interesting questions.

- Can the *Balanced Scorecard* be adapted to fit a governmental setting?
- If so, how is it adapted (i.e., what are the changes)?
- Are there any successful applications of the *Balanced Scorecard* in state, local, or federal government agencies?
- What are examples of cost measures? Of lead indicators?
- What are the desired characteristics of measures in the government sector?
- What are the limitations or weaknesses of this approach for this setting?

#### Required

Search the Internet to obtain information that will allow you to answer the above questions. You might start with <http://www.balancedscorecard.org>, the homepage of the *Balanced Scorecard* Institute. The *Balanced Scorecard* Institute is a nonprofit source of information about applications of the *Balanced Scorecard* in government. Its mission is to serve as a Web clearinghouse for government managers to exchange information, ideas, and lessons learned in building strategic management systems using the *Balanced Scorecard* approach.

4-16  
Part 2: Planning and Control

**Questions for Writing and Discussion.** Approximately 15 to 25 short-answer questions appear at the end of each chapter to test students' knowledge of chapter concepts. Many of the questions call for students to use critical thinking and written and oral communication skills. Several questions can be used to stimulate class participation and discussion. (see pages 22 and 261)

**Exercises.** Exercises usually emphasize one or two chapter concepts and can be completed fairly quickly (30 minutes maximum). Exercises require basic application and computation and often ask students to interpret and explain their results. (see pages 54, 139, and 261)

**Problems.** Each chapter contains many end-of-chapter problems, with varying degrees of length and difficulty. Problems usually have more than one issue and present challenging situations, complex computations, and interpretations. (see pages 58, 147, and 268)

Exercises and problems are correlated by learning objectives, listed in the margin below the exercise and problem titles. Exercises and problems adapted from past CMA exams are designated with a margin icon.

**Managerial Decision Cases.** Most chapters contain at least two cases. Cases have greater depth and complexity than problems. They are designed to help students integrate multiple concepts and further develop their analytical skills. Several cases deal with ethical behavior. (see pages 62, 64, and 435)

**Research Assignments.** Research assignments appear in all chapters (except Chapter 1), allowing students to expand their research and communication skills beyond the classroom. One research assignment in each chapter, labeled "Cybercase," requires the student to research information on the Internet. (see pages 65, 159, and 276)

### Additional Features of the Sixth Edition

**Coverage of Environmental Costing.** We continue to provide a full chapter (Chapter 12) on this current and relevant topic. (see pages 490–526)

**International Coverage.** To emphasize the importance of international issues, we provide a full chapter on this topic (Chapter 14) as well as examples integrated throughout the text. (see pages 576–610)

**Ethics.** As with previous editions, the sixth edition emphasizes the study of ethical conduct for management accountants. The role of ethics is discussed in Chapter 1, and the code of ethics developed by the Institute of Management Accountants is introduced. Examples of ethical conduct relative to management accounting issues are provided in other chapters as well. Chapter 1 has several substantive problems on ethics, and subsequent chapters have at least one problem or case involving an ethical dilemma. These problems allow the instructor to introduce value judgments into management accounting decision making. Chapter 14, dealing with international issues in management accounting, also has a section that discusses ethics in the international environment. (see pages 16–18, 28, and 158–159)

**Real-World Emphasis.** The sixth edition incorporates real-world applications of management accounting concepts, making the study of these concepts more familiar and interesting to the student. Opening scenarios introduce chapter topics within the context of realistic business examples. Real-company examples are incorporated in many chapters. Names of real companies are highlighted throughout the text for easy identification and are listed in a company index at the back of the text. In addition, the URLs for many real-company Web sites are shown in the margins. Photos have been added in individual chapters to help students relate to the real-world nature of management accounting. (see pages 34, 39, and 119)

**Increased Coverage of Service Industry.** Service businesses are experiencing unprecedented growth in today's economy. Managers of service businesses often use the same management accounting models as manufacturers, but they must adapt them to their own unique situations of providing intangibles to consumers. To address this need, we have increased the coverage of service industry applications in the sixth edition. In addition, many real-company examples of service businesses are given. (see pages 38–39, 45, and 112)

## Ancillaries

**Check Figures.** Key figures for solutions to selected problems and cases are provided at the end of the text as an aid to students as they prepare their answers.

**Study Guide, 0-324-12868-1 (Prepared by Donna K. Ulmer, St. Louis Community College).** The study guide provides a detailed review of each chapter and allows students to check their understanding of the material through quizzes and exercises. Specifically, students are provided with a key terms test, a chapter quiz, and practice exercises. Answers are provided for all assignment material.

**Instructor's Manual, 0-324-12678-6 (Prepared by Donna K. Ulmer, St. Louis Community College).** Expanded for the sixth edition, the instructor's manual contains a complete set of lecture notes for each chapter, a listing of all exercises and problems with estimated difficulty and time required for solution, and a transition guide for the sixth edition of *Management Accounting*, as well as other widely used management accounting texts.

**Solutions Manual, 0-324-12878-9 (Prepared by Don Hansen and Maryanne Mowen, Oklahoma State University).** The solutions manual contains the solutions for all end-of-chapter questions, exercises, problems, and cases. Solutions have been error-checked to ensure their accuracy and reliability.

**Solutions Transparencies, 0-324-12672-7.** Acetate transparencies for selected solutions are available to adopters of the sixth edition.

**Test Bank, 0-324-12673-5 (Prepared by Maria Roxas, Central Connecticut State University).** Extensively revised for the sixth edition, the test bank offers multiple-choice problems, short problems, and essay problems. Designed to make exam preparation as convenient as possible for the instructor, each test bank chapter contains enough questions and problems to permit the preparation of several exams without repetition of material.

**ExamView Testing Software, 0-324-12676-x.** This supplement contains all of the questions in the printed test bank. This program is an easy-to-use test creation software compatible with Microsoft Windows. Instructors can add or edit questions, instructions, answers, and select questions (randomly or numerically) by previewing them on the screen. Instructors can also create and administer quizzes online, whether over the Internet, a local area network (LAN), or a wide area network (WAN).



**Spreadsheet Templates, 0-324-12869-x (Prepared by Peggy Hussey).** Spreadsheet templates using Microsoft Excel® provide outlined formats of solutions for selected end-of-chapter exercises and problems. These exercises and problems are identified with a margin symbol. The templates allow students to develop spreadsheet and “what-if” analysis skills.

**PowerPoint Slides (Prepared by C. Douglas Cloud, Pepperdine University).** Selected transparencies of key concepts and exhibits from the text are available in PowerPoint presentation software. Available on the Instructor’s Resource CD-ROM.

**Instructor’s Resource CD-ROM, 0-324-12680-8.** Key instructor ancillaries (solutions manual, instructor’s manual, test bank, and PowerPoint slides) are provided on CD-ROM, giving instructors the ultimate tool for customizing lectures and presentations.

**Web Site (<http://hansen.swcollege.com>).** A Web site designed specifically for *Management Accounting*, sixth edition, includes online and downloadable instructor and student resources. The Web site features an interactive study center organized by chapter, with learning objectives, Web links, glossaries, and online quizzes with automatic feedback.

**WebTutor™ on WebCT and on Blackboard.** WebTutor complements *Management Accounting*, sixth edition, by providing interactive reinforcement. WebTutor’s online teaching and learning environment brings together content management, assessment, communication, and collaboration capabilities for enhancing in-class instruction or as a study resource for students. Access certificates for WebTutor can be bundled with the textbook or sold separately. For more information, including a demo, visit <http://webtutor.swcollege.com>.

**Personal WebTutor™.** This Web-based study guide reviews critical text material chapter by chapter. Access certificates for Personal WebTutor can be bundled with the textbook, or students can preview and purchase the product directly online for subscription periods of one month or four months. Visit <http://pwt.swcollege.com> for more information and to view a demo.

**InfoTrac College Edition.** With InfoTrac College Edition, your students can receive online access, any time and anywhere, to a database of full-text articles from hundreds of popular and scholarly periodicals, such as *Newsweek*, *Fortune*, *Entrepreneur*, *Journal of Management*, and *Nation’s Business*, among others. Students can use its fast and easy search tools to find relevant news and analytical information among the tens of thousands of articles in the database—updated daily and going back as far as four years—all at a single Web site. InfoTrac is a great way to expose students to online research techniques, with the security that the content is academically based and reliable. An InfoTrac College Edition subscription card is packaged free

with new copies of *Management Accounting*, sixth edition. For more information, visit <http://www.swcollege.com/infotrac/infotrac.html>.

**BusinessLink Videos.** A series of five videos illustrates key management accounting concepts including activity-based costing, product costing, and total quality management. These videos feature companies such as Archway Cookies, World Gym, and Symbios Logic. A student workbook and an instructor's manual are available to accompany the videos.

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