Kenneth A. Merchant
& Wim A. Van der Stede

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Performance Measurement, Evaluation and Incentives

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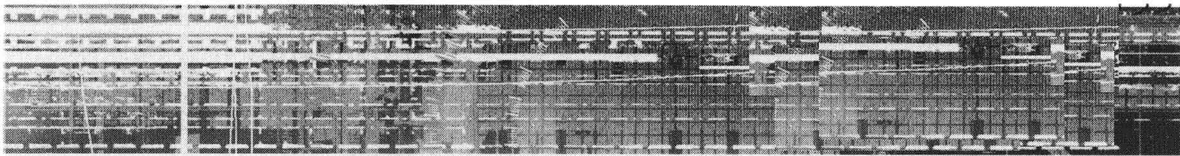

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TO OUR FAMILIES

Gail, Abbidee, Madelyn (KM)

Ashley, Emma (WVDS)

PREFACE

This book provides materials for a comprehensive course on management control systems (MCSs). MCSs are defined broadly to include everything managers do to help ensure that their organization's strategies and plans are carried out or, if conditions warrant, that they are modified. The focus of the book, however, is on what we call *results controls*, which involve motivating employees to produce the outcomes the organization wants. This type of management control, which requires performance measures and evaluation and the provision of incentives, dominates in importance in all but some of the smallest organizations.

Because management control is a core function of management, all students interested in business or management can benefit from this book. However, courses based on the materials in this book should be particularly useful for those who are, or aspire to be, managers, management consultants, financial specialists (for example controller, financial analyst, auditor), or human resource specialists (for example personnel director, compensation consultant).

This book includes about 50 cases as classroom materials. The case method, which stimulates learning through the analysis of actual (or sometimes hypothetical) events, is generally recognized to be the best method for teaching a MCSs course. Because MCSs, the contexts in which they operate, and the outcomes they produce are complex and multi-dimensional, simple problems and exercises cannot capture the essence of the issues managers face in designing and using MCSs. Students must develop the thinking processes that will guide them successfully through decision tasks with multiple embedded issues and large amounts of relatively unstructured information. And they must learn to develop problem-finding skills as well as problem-solving skills. Case analyses provide the best method available for simulating these tasks in a classroom.

The discussions in this book assume a basic level of knowledge of management accounting (for example variance analysis) and core MCS elements (for example budgeting). The book was designed primarily for use with graduate students and practicing professionals, but it can also be used successfully with undergraduate students who have had a prior management accounting course. It should be recognized, however, that some of the cases in this book might be too challenging for undergraduate students. Cases for use in an undergraduate course have to be chosen carefully.

This book is different from other MCS texts in a number of important ways. First, the basic organizing framework is different. The first major module of the book discusses management controls based on the object of control: results, actions, or personnel/culture.

The object-of-control framework has considerable advantages over other possible organizing frameworks. It has clean, clearly distinguishable categories. It is also relatively all-inclusive in the sense that readers can relate many management controls and other control classifications and theories (for example proactive versus reactive controls, prevention versus detection controls, and agency theory concepts such as monitoring versus incentives) to it. And it is intuitive; that is, students can easily see that managers must make choices from among these categories of management control. Thus, using the object-of-control focus, the overall structure of the book can be summarized as being organized around a framework that describes the core management control problems that need to be addressed, the MCSs that can be used to address those problems, the most important situational factors that can cause managers to choose one set of management controls over another, and the outcomes that can be produced, both positive and negative.

Second, the book's treatment of management control is broad. Like all MCS textbooks, this book focuses intensively on the use and effects of financial performance measures, which dominate in importance at managerial levels. However, this book also provides a broader treatment of management controls (organized around the object-of-control framework) to put the financial results controls in proper perspective. For example, the book describes many situations where financial results controls are not effective and discusses the alternatives that managers can use in those situations (such as non-financial performance indicators, centralization of authority, management audits, or creation of a team-oriented culture).

Third, the book provides considerable discussion on the causes and remedies of the most common and serious management control-related problems, including myopia, suboptimization, uncontrollability, and gameplaying.

Fourth, the book provides a whole chapter of ethics coverage. This makes it perhaps unique among accounting and control textbooks. There are many management control-related ethical issues, and the recent debacles at, for example, Enron, WorldCom, and Global Crossing clearly suggest the need to develop managers' and prospective managers' ethical reasoning skills more fully.

Fifth, the important concepts, theories, and issues are not discussed just in abstract terms. They are illustrated with a large number of real-world examples, far more than is included in any other MCS textbook. The examples make the textual discussion more concrete and bring the subject to life.

And finally, the mix of cases included in this book is different from those included in other MCS textbooks in four important ways:

- A vast majority of the cases are real (not "armchair" cases). Further, a high proportion of the cases are undisguised (that is, they use the companies' real names and describe the facts of the actual situations). Reality and lack of disguise enhance student interest and "secondary learning" (that is, about companies, industries, and specific people).
- Most of the cases include rich descriptions of the context within which the MCSs are operating. The rich descriptions give students opportunities to try to identify and address management control problems and issues within the multidimensional situations within which practicing managers have to deal with them.
- Most of the cases are of relatively recent vintage, and the set of cases has been chosen to ensure coverage of the latest MCSs topics and issues, such as how to minimize management myopia, how to motivate all employees to maximize shareholder value, and whether to use the EVA™ or balanced scorecard measurement approaches.
- The cases are descriptive of the operations and issues faced by companies located in many different countries and regions around the world, including Asia, Europe, and Latin America, as well as North America. This is different from the case selection in most other MCS textbooks, which are heavily U.S.-focused.

The cases included in this book permit the exploration of the management control issues in a broad range of settings. Included in the book are cases on both large and small firms, manufacturing and service firms, domestic-focused and multinational firms, and for-profit and not-for-profit organizations. And the cases present issues faced by personnel in both line and staff roles at corporate, divisional, and functional levels of the organization. Instructors can use this set of cases to teach a MCSs course which is broad in scope or one which is more narrowly focused (for example MCSs in service organizations).

The cases provide considerable scheduling flexibility. Most of the cases cut across multiple topic areas because MCSs are inherently multidimensional. The focus of a given case (for example the HCC Industries case placed in Chapter 9) might be on, for example, the setting of performance targets. But such a case must also describe the organization structure, the characteristics of the people in key positions, the planning processes, performance measures, and incentive systems. As a consequence, the ordering of the cases in the book is not intended to be rigid. Many alternatives are possible.

An Instructor's Manual is available for lecturers, both electronically and as hard copy, and which includes two model syllabi, a note on the case method of instruction, and the teaching notes for the cases included in the textbook. Additional teaching materials have been made available electronically on the website (www.booksites.net/merchant), particularly instructional PowerPoint slides for each chapter of the book, as well as databases (Excel spreadsheets) for the Bank of the Desert (A) and (B) case studies.

In developing the materials for this book, we have benefited from the insightful comments, helpful suggestions, and cases of many people. Ken Merchant owes special thanks to the two professors who served as his MCSs mentors at the Harvard Business School: William Bruns and Richard Vancil. The authors wish to thank the authors of cases included in this book, including George Baker, Christopher Bartlett, Norman Berg, Robert Kaplan, Nitin Nohria, and Lynn Sharp Paine. Valuable research assistance was provided by Xiaoling (Clara) Chen, Sung-Han (Sam) Lee, Salma Majeed, Elizabeth Orozco, and Liu Zheng, all currently or formerly at USC. We also appreciate the punctual administrative assistance from Ingrid McClendon and Linda Ramos, both at USC. At Pearson Education, we are indebted to Justinia Seaman (Acquisitions Editor – Accounting, Finance & Economics), Karen Mclaren (Senior Editor – Higher & Professional Education), and Janey Webb (Editorial Assistant). Jacqueline Twyman made helpful suggestions in copyediting the manuscript.

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Finally, we wish to acknowledge that there is certainly no one best way to convey the rich subjects related to MCSs. We have presented one useful framework in the best way we know how, but we welcome comments about the content or organization of the book, or regarding specific errors or omissions. Please direct them to us.

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Section I

THE CONTROL FUNCTION OF MANAGEMENT

MANAGEMENT AND CONTROL

Management control is a critical function in organizations. Management control problems can lead to large losses and possibly even to organizational failure. Here are some recent examples:

- In 1995 venerable U.K. bank Baring Brothers, founded in 1817, declared bankruptcy. The bankruptcy was caused by losses on unauthorized trades of futures contracts made by a Singapore-based trader named Nicholas Leeson. Before his trades were stopped Leeson's losses totaled nearly $1.1 billion, more than twice Baring Bank's capitalization. A Bank of England investigation into the causes of the losses found major weaknesses in the Baring's control systems, including lack of segregation of duties, lack of position limits and confused lines of management responsibility.[1] When Baring failed, Leeson was two days short of reaching his twenty-eighth birthday! In 2002 a similar case at Allied Irish Banks led to huge currency-trading losses at its Baltimore unit, Allfirst Financial. Lack of adequate risk controls and lack of independent confirmation of trades left the bank wide open to fraudulently concealed trading losses of $691 million over a five-year period. The headline of *The Wall Street Journal* article suggested that "Lax Controls May Explain Trading Loss at Allied Irish."[2]
- In early 1996 at Baby Superstore, a retailer of baby and young children's products with 63 stores in 18 states and annual sales of just under $300 million, managers discovered that an accounting error had caused cash reserves to be overstated in the last fiscal year. While this single mistake was not terribly costly by itself, Baby Superstore's stock price fell 19% on the day the mistake was publicly disclosed. Why? Some analysts concluded that the mistake probably revealed a lack of internal controls, and that deficiency placed significant portions of the company's assets at risk.[3]
- Several times in 2001 analysts at Morgan Stanley Dean Witter issued research reports questioning the accounting practices of Qwest Communications International, a large telecommunications company headquartered in Denver, Colorado. The analysts questioned the company's accounting for some investments, sales of some network capacity, pension plan benefits, and an equipment outsourcing deal. Qwest management vehemently disputed the conclusions. Nonetheless Qwest's market capitalization, which was $70 billion at the start of the year, fell over half, to $30 billion, by the end of the year. Even worse, Qwest stock was selling at a 10–20% discount relative to other similar telecommunications companies. Said one fund manager, "The market is telling you the company has a credibility problem."[4] The problems continued as in early 2002 the company's shares were trading at about 20% of their former levels.
- In 2002 a former National Archives' employee admitted that he stole dozens of historical documents between 1996 and 1999 simply by putting them in his briefcase. The documents

included autographed pictures of Apollo astronauts, presidential pardons signed by Abraham Lincoln and slave trade materials, which he sold to collectors for more than $200,000. Investigators were tipped off to the theft when a federal worker became suspicious of an item offered for sale online. Clearly, the National Archives and Records Administration did not have good controls in place.[5]

Despite the importance of having good management control systems (MCSs), as the above examples illustrate, management critics have argued that adding controls does not always lead to better control and that the MCSs in common use cause managers to be excessively short-term oriented or are prone to stifle creativity and initiative.

Understanding and comparing the views in the books and articles written on management control is difficult, however, because the language of "control" is imprecise. The term control, as it applies to a management function, does not have a universally accepted definition. An old, narrow view of a MCS is that of a simple *cybernetic* system involving a single feedback loop, analogous to a thermostat. Thermostats include a single feedback loop: they measure the temperature, compare those measurements with the desired standard and, if necessary, take a corrective action (turn on, or off, a boiler or an air conditioner). In a MCS feedback loop managers measure performance, compare that measurement with a preset performance standard and, if necessary, take corrective action.

This book, however, like many other recent writings on management control, takes a broader view.[6] It recognizes that many management controls in common use, such as direct supervision, employee-hiring standards, and codes of conduct, do not focus on measured performance. They focus instead on encouraging, enabling or, sometimes, forcing employees to act in the organization's best interests. This book also recognizes that some management controls are *proactive* rather than *reactive*. Proactive means that the controls are designed to *prevent* problems before the organization suffers any adverse effects on performance. Examples of proactive controls include planning processes, required expenditure approvals, computer passwords and segregation of employees' duties. Management control, then, includes all the devices or systems managers use to ensure that the behaviors and decisions of their employees are consistent with the organization's objectives and strategies.[7] The systems themselves are commonly referred to as *management control systems*.

Designed properly, MCSs influence employees' behaviors in desirable ways and, consequently, increase the probability that the organization will achieve its goals. That is, the primary *function* of management control is to influence behaviors in desirable ways. The *benefit* of management control is the increased probability that the organization's objectives will be achieved.

MANAGEMENT AND CONTROL

Management control is the back end of the management process. This can be seen by looking at the various ways in which the broad topic of management is disaggregated.

Management

Management literature includes many definitions of management. All relate to the processes of organizing resources and directing activities for the purpose of achieving organizational objectives.

TABLE 1.1 Different ways of breaking down the broad area of management into smaller elements

Functions	*Resources*	*Processes*
Product (or service) development	People	Objective setting
Operations	Money	Strategy formulation
Marketing/sales	Machines	Management control
Finance	Information	

Source: K. A. Merchant, *Modern Management Control Systems: Text and Cases* (Upper Saddle River, NJ: Prentice Hall, 1998), p. 3.

Inevitably, those who study and teach management have broken the subject into smaller, more manageable elements. The most prominent classification schemes are shown in Table 1.1. The first column identifies the basic management functions: product (or service) development, operations (manufacturing products or performing services), marketing/sales (finding buyers and making sure the products and services fulfill customer needs), and finance (raising money). Virtually every management school offers courses focused on only one, or only part of one, of these individual functions.

The second column of Table 1.1 identifies the major types of resources with which managers must work: people, money, machines, and information. Management schools also offer courses organized using this classification. These courses are often called human resource management, finance, production, and information systems, respectively.

The term *management control* appears in the third column of Table 1.1, which separates the management functions along a process continuum involving objective setting, strategy formulation and management control. Many management courses, including business policy, strategic management and management control systems, focus on elements of the management process. To focus on management control we must distinguish the concept from objective setting and strategy formulation.

Objective setting

Knowledge of *objectives* is a necessary prerequisite for the design of any MCS and, indeed, for any purposeful activities. Objectives do not have to be quantified and do not have to be financial, such as 20% annual return on equity; a not-for-profit organization's primary objective might be to provide shelter for homeless people, for example. In any organization, however, employees must have some understanding of what the organization is trying to accomplish. Otherwise no one could claim that any of the employees' actions are purposive, and no one could ever support a claim that the organization was successful.

In most organizations the objectives are known. That is not to say that all employees always agree unanimously as to how to balance their organizations' responsibilities to all of their stakeholders (including owners, debtors, employees, suppliers, customers, and the society at large). They rarely do. But early in their histories organizations develop compromise mechanisms to resolve conflicts among stakeholders and reach some level of agreement about the objectives they will pursue.

Strategy formulation

Strategies define how organizations should use their resources to meet their objectives. We can view strategies as constraints that managers place on themselves and their employees so that they will focus their activities on what their organizations do best, particularly in areas where they have an advantage over their competitors. Well-conceived strategies, which result from analyzing the organizations' strengths and weaknesses in the marketplace, guide managers in successfully pursuing their organizations' objectives.

Strategies can be specified formally or left largely unspecified. Many organizations develop formal strategies through systematic, relatively open, often elaborate planning processes. Other organizations do not have formal, written strategies; instead they try to respond to opportunities that present themselves.[8] Major elements of these latter organizations' strategies *emerge* from a series of interactions between management, employees, and the environment; from decisions made spontaneously; and from local experimentation designed to learn what activities lead to the greatest success. Nonetheless, if some decision-making consistency exists, a strategy can be said to have been formed, regardless of whether managers planned or even intended that particular consistency.[9]

Judging from employees' actions it is sometimes difficult to identify an organization's strategy. Spontaneous decisions sometimes conflict directly with the organizations' formal strategic statements, not because of management control problems but because the formal strategic statements have become obsolete and employees have decided to take actions that are better than the formal strategy suggests. In the early 1980s Intel's stated plan was to be a major player in memory chips (as well as microprocessors), but in 1985 it exited the dynamic random access memory (DRAM) business. In retrospect Andy Grove, Intel's chief executive officer (CEO), observed that the company was "fooled by its own strategic rhetoric." Its marketing, pricing, and investment decisions as early as 1983 made it clear that some key employees had made a decision to retreat from memory chips.[10] The point is that the actual strategy an organization enacts may be different from its formal strategic statements.

Not even the most elaborate strategic visions and statements are complete to the point where they detail every desired action and contemplate every possible contingency. However, for purposes of designing MCSs, it is useful to have strategies that are as specific and detailed as possible, if those strategies are well thought out and can be kept current. The formal strategic statements make it easier for management both to identify the feasible management control alternatives and to implement them effectively. The management controls can be targeted to the organization's critical success factors, such as developing new products, keeping costs down, or enhancing market share, rather than aiming more generally at improving corporate profitability. Formal strategic statements are not mandatory for management control purposes, however. Many organizations with largely emergent strategies have effective MCSs, although their control alternatives are often more limited.

Management control versus strategic control

In the broadest sense, control systems can be viewed as having two basic functions: strategic control and management control. *Strategic control*[11] involves managers addressing the question: Is our strategy valid? Or, more appropriately in changing environments, they ask: Is our strategy still valid, and if not, how should it be changed? All firms must be concerned with strategic control issues, but the concern that a strategy may have become obsolete is obviously greater in firms operating in more dynamic environments.

Management control involves addressing the general question: Are our employees likely to behave appropriately? This question can be split into several parts. First, do our employees understand what we expect of them? Second, will they work consistently hard