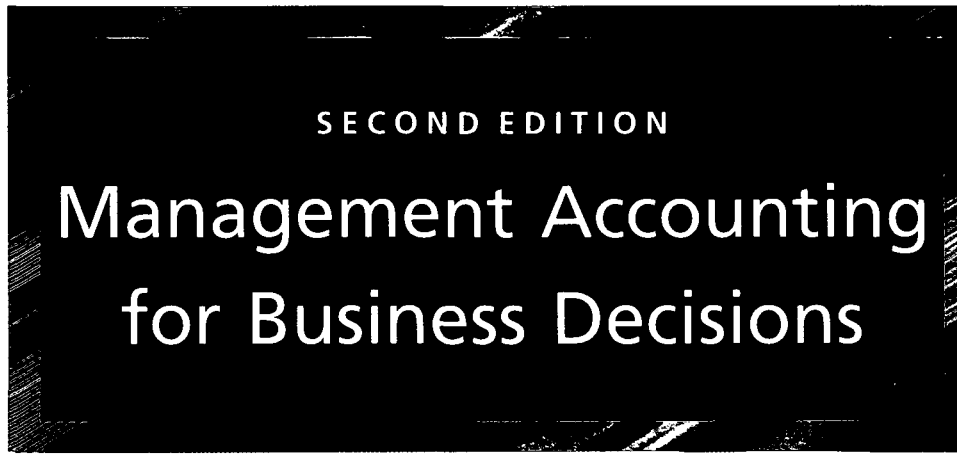

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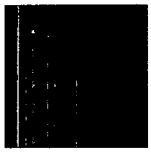

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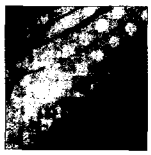

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Preface

The aim of this book is to provide an introduction to the theory and practice of management accounting and emphasize its role in making business decisions. It is intended primarily for non-accounting students who are pursuing a one or two semester basic management accounting course. The more advanced technical aspects which are required by specialist accounting students are not covered. These topics are covered in the author's successful *Management and Cost Accounting*, the fifth edition of which is also published by Thomson Learning.

Feedback from teachers in a large number of universities indicated that they had found the content, structure and presentation of *Management and Cost Accounting* extremely satisfactory and most appropriate for specialist accounting students pursuing a two year management accounting course. They also indicated that there was a need for a book (based on *Management and Cost Accounting*) for non-accounting students that avoided going into the technical detail demanded by specialist accounting students. This book is particularly suitable for non-specialist accounting students on the following courses:

- a first-level course for undergraduate students
- higher national diploma in business and finance and similar qualifications in Europe, Africa, Australia, New Zealand and Asia
- post-graduate introductory management accounting courses, such as MBA courses and conversion Masters.

An introductory course in financial accounting is not a prerequisite, although many students will have undertaken such a course.

The flexibility provided by modular courses can result in introductory classes consisting of a group of students not studying management accounting beyond an intermediate level and a further group continuing their studies beyond the intermediate level. *Management Accounting for Business Decisions* is appropriate for the former group and *Management and Cost Accounting* can be adopted by the latter. Because much of the content (and all of the examples and questions) in *Management Accounting for Business Decisions* have been extracted from *Management and Cost Accounting*, lecturers can assign identical reading and questions and also recommend two separate books that are geared to the specific requirements of the students. The inclusion of the same content in both books also enables lecturers who are familiar with *Management and Cost Accounting* to use the relevant material in this book on introductory courses by adopting *Management Accounting for Business Decisions*.

Structure and plan of the book

In writing this book I have adopted the same structure and included much of the introductory content of *Management and Cost Accounting*. The major theme is that different information is required for different purposes. The framework is based on the principle that there are three ways of constructing accounting information. One is conventional cost accounting with its emphasis on producing product costs for allocating costs between cost of goods sold and inventories to meet external and internal financial accounting inventory valuation and profit measurement requirements. The second is the notion of decision relevant costs with the emphasis on providing information to help managers make good decisions. The third is responsibility accounting, cost control and performance measurement which focuses on both financial and non-financial information, in particular the assignment of cost and revenues to responsibility centres. This book focuses on the second and third of the above purposes. Conventional cost accounting is not emphasized because an understanding of this topic is not essential for those students who are not specializing in accounting.

This book consists of 16 chapters divided into four parts. The first part (Part One) consists of two chapters and provides an introduction to management and cost accounting and a framework for studying the remaining chapters. Part Two consists of seven chapters and is entitled 'Information for Decision-making'. Here the focus is on measuring and identifying those costs which are relevant for different types of decisions. The title of Part Three is 'Information for Planning, Control and Performance Measurement'. It consists of five chapters and concentrates on the process of translating organizational goals and objectives into specific activities and the resources that are required, via the short-term (budgeting) and long-term planning processes, to achieve the goals and objectives. In addition, the management control systems that organizations use are described and the role that management accounting control systems play within the overall control process is examined. The emphasis here is on the accounting process as a means of providing information to help managers control the activities for which they are responsible. Performance measurement and evaluation within different segments of the organization is also examined. Part Four consists of two chapters and is entitled 'Cost Management and Strategic Management Accounting.' The first chapter focuses on cost management and the second on strategic management accounting.

Major changes in the content of the second edition

During the late 1980s and the 1990s the theory and practice of management accounting have been subject to enormous changes. Many of these changes were described in the first edition of this book, but they were presented as emerging management accounting issues. They were also presented as separate topics, rather than being integrated with the existing theories, concepts and techniques. It was unclear at the time of writing the first edition whether the proposed changes would become part of mainstream management accounting. In the intervening years these changes have become firmly established in the literature and adopted by innovative companies around the world.

The major objective in writing the second edition has therefore been to integrate recent developments in management accounting with the established conventional wisdom of the subject. This objective created a need to thoroughly review the content of the first edition and integrate recent developments. The opportunity was also taken to rewrite and improve

the presentation of much of the existing material but the existing structure has been maintained.

The notable alterations are:

1. Chapter 16 (Current developments in management accounting) of the first edition has been deleted. As indicated above the current and future developments have been integrated with established conventional wisdom. Two new chapters (Chapters 15 and 16) have been added that incorporate and extend some of the material that has been deleted from Chapter 16 of the first edition.

   Chapter 15 is titled ' Cost management' and examines the various approaches that fall within the area of cost management. These new approaches are compared with traditional management accounting control techniques and the text emphasizes how the new approaches, combined with traditional techniques, control and manage costs more effectively. Chapter 16 is titled 'Strategic management accounting.' Much has been written about strategic management accounting during the past decade but there is still no comprehensive framework as to what constitutes strategic management accounting. Chapter 16 examines the elements of strategic management accounting and describes the different contributions that have been made to its development. In addition, recent developments, such as the balanced scorecard approach, that seek to incorporate performance measurement within the strategic management process are described.

   Apart from cost management and strategic management accounting, the remaining current developments described in Chapter 16 of the first edition related to activity-based costing, customer profitability analysis and the integration of financial and non-financial measures. The issues relating to activity based costing have been incorporated into Chapter 6 (Activity-based costing). Customer profitability analysis has been incorporated into Chapter 7 (Pricing decisions and profitability analysis) and integration of financial and non-financial measures is presented within a balanced scorecard framework in Chapter 16.
2. Extensive changes have been made to Chapter 2 (Cost and revenue classification) and the chapter has been re-titled 'An introduction to cost terms and concepts.'
3. New material has been added to Chapter 3 (Cost–volume–profit analysis) relating to multi-period cost–volume–profit analysis.
4. Chapter 4 (Special studies: measuring relevant costs for decision-making) has been substantially rewritten. The chapter is now titled 'Measuring relevant costs and revenues for decision-making.'
5. Chapter 5 (Traditional product costing systems) has been rewritten and retitled 'Cost assignment.' The new chapter emphasizes cost system design issues and explains why the optimal cost system is different for different organizations. The factors that determine the choice of an optimal cost system for an organization are also discussed.
6. The chapter relating to activity-based-costing (Chapter 6) has also been extensively revised and a substantial amount of new material has been added including activity-based profitability analysis and ABC in service organizations.
7. Chapter 7 (Accounting information for pricing decisions) has been replaced by a new chapter entitled 'Pricing decisions and profitability analysis.' The new chapter is structured mainly around four areas – *price setting* firms facing *short-run* pricing decisions, *price setting* firms facing *long-run* pricing decisions, *price-taking* firms facing *short-run* product mix decisions and *price-taking* firms facing *long-run* product mix decisions. Profitability analysis is presented within the final category. As indicated above customer profitability analysis is also included within this chapter.

8. New material has been added to Chapter 9 (Capital investment decisions) that examines the effect of performance measurement on capital investment decisions.
9. Major structural changes have been made to Part Three (Information for Planning, Control and Performance Measurement). Activity-based budgeting has been incorporated into Chapter 10 (The budgeting process). Chapter 11 (Management control systems) is a new chapter. To fully understand the role that management accounting control systems play in the control process, it is necessary to be aware of how they relate to the entire array of control mechanisms used by organizations. Chapter 11 describes the different types of controls that are used by companies. The elements of management accounting control systems are described within the context of the overall control process and the behavioural issues are also examined. The relevant content from Chapter 14 of the first edition relating to the behavioural aspects of accounting control systems has been incorporated into this chapter.

   Chapters 13 and 14 concentrate on the special problems of control and measuring the performance of divisions and other decentralised units within an organization. In the previous edition these two chapters were combined. Both chapters have been extensively rewritten. Chapter 13 (Divisional financial performance measures) includes new material on Economic Value Added (EVA$^{(TM)}$), a new technique for measuring the performance of business units, and how the dysfunctional consequences of short-term financial measures can be minimized. The content of Chapter 14 (Transfer pricing in divisionalized companies) has also been re-organized and substantially re-written. A case problem has been introduced that is used to illustrate the different methods of transfer pricing.
10. As indicated above Part Four includes two new chapters. Chapters 15 focuses on cost management and Chapter 16 on strategic management accounting.
11. It will be apparent to adopters of the first edition that substantial changes have been made to the presentation of the material. In particular, the text is now presented in several colours and considerable improvements have been made to the exhibits, tables and diagrams in order to improve their explanatory effectiveness.
12. The second edition now includes case studies and a dedicated website.

Case studies

The final section of this book includes seven case studies. These cases generally cover the content of several chapters and contain questions to which there is no ideal answer. They are intended to encourage independent thought and initiative and to relate and apply your understanding of the content of this book in more uncertain situations. They are also intended to develop your critical thinking and analytical skills. The authors of the cases have provided teaching notes for lecturers and are included in the instructors' guide accompanying this book. Additional case studies and teaching notes are also available on the dedicated website.

Highlighting of advanced reading sections AR

Some readers will not require a comprehensive treatment of all of the topics that are contained in the book. To meet the different requirements of the readers, the more advanced material that is not essential for those readers not requiring an in-depth knowledge of a particular topic has been highlighted. The start of each advanced reading section is marked with the symbol AR and a vertical red line is used to highlight the full section. If you do require an in-depth knowledge of a topic you may find it helpful to initially omit the advanced reading sections, or skim them, on your first reading. You should read them in detail only when you fully understand the content of the remaining parts of the chapter. The advanced reading sections are not normally an essential requirement of an introductory course.

International focus

The previous edition of this book presented the content within a UK setting. The book has now become an established text in many different countries throughout the world. Because of this, the second edition has adopted a more international focus and regulatory requirements and taxation aspects have not been restricted to a UK setting. A new feature is the presentation of boxed exhibits of surveys relating to management accounting in many different countries, particularly the European mainland. To simplify the presentation, however, the UK pound monetary unit has been used throughout the book. Most of the assessment material has incorporated questions set within a UK context. These questions are, however, appropriate for world-wide use and contain the beneficial features described above for case study assignments.

Recommended reading

A separate section is included at the end of many of the chapters providing advice on key articles or books which you are recommended to read if you wish to pursue topics and issues in more depth. Many of the references are the original work of writers who have played a major role in the development of management accounting. The contribution of such writers is often reflected in this book but there is frequently no substitute for the original work of the authors. The detailed references are presented in the Bibliography towards the end of the book.

Assessment material

Throughout this book I have kept the illustrations simple. You can check your understanding of each chapter by answering the self-assessment questions. Answers to these questions are contained at the end of each chapter. An *Instructors' Manual* that provides answers to the remaining end-of-chapter questions and teaching notes relating to the case studies is available to lecturers on the dedicated website. In recognition of the increasing need for the integration of IT teaching into the curriculum, this book is accompanied by an on-line *Spreadsheet Applications Manual,* which has been written by Dr Alicia Gazely of Nottingham Business School. This explains basic spreadsheet techniques and then builds

up ten spreadsheet models which illustrate and allow students to explore examples in the main text. The spreadsheets, guidance notes and on-line access are available to teachers on adoption. Further details of this package are given in the section covering the dedicated website below.

Supplementary material

Dedicated website

The dedicated website can be found at **http://www.drury-online.com**. The lecturer section is password protected and the password is available free to lecturers who confirm their adoption of the second edition – lecturers should complete the registration form on the website to apply for their password, which will then be sent to them by email.

The following range of material is available:

For students and lecturers (open access)

Testbank (compiled by Wayne Fiddler of Huddersfield University)

Interactive multiple choice questions to accompany each chapter. The student takes the test on-line to check their grasp of the key points in each chapter. Detailed feedback is provided for each question if the student chooses the wrong answer.

Links to accounting and finance sites on the web

Including links to the main accounting firms, accounting magazines and journals and careers and job search pages.

IEBM definitions

Alphabetical list of accounting and finance definitions taken from the pocket edition of the *International Encyclopedia of Business and Management.*

For lecturers only (password protected)

Extra case studies

Internationally focused case studies. (NB Teaching notes to accompany the cases are available in the password protected lecturer area of the site). Additional case studies will be added to the website during the life of the second edition.

Instructors' manual

Available to download free from the site in PDF (Portable Document Format), the manual includes answers to the end of chapter questions included in the book and teaching notes to the case studies.

Teaching notes to the case studies

To accompany the extra case studies available on the website.

Spreadsheet excercises (compiled and designed by Alicia Gazely of Nottingham Trent University)

Created in Excel to accompany the self-assessment exercises in the book, the exercises can be saved by the lecturer to their own directories and distributed to students as each topic is covered. Each exercise explains a basic spreadsheet technique which illustrates, and allows the student to explore, examples in the main text.

Overhead transparencies

Available to download free from the site in PDF.

PowerPoint (TM) slides

PowerPoint presentations to accompany each chapter.

Alternative course sequences

Although conceived and developed as a unified whole for a one year introductory course, the book can be tailored to the individual requirements of two separate modular semester courses. All or selected chapters from Parts One and Two can be assigned to the first module and Parts Three and Four to the second module. Alternatively, Part One and selected chapters from Parts Two and Three can be assigned to the first module and the remaining chapters to the second module. For example, topics selected from Chapters 1–5 and Chapters 10–12 may be assigned to the first module and the remaining content to the second module.

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PART ONE

Introduction to Management and Cost Accounting

The objective of this section is to provide an introduction to management and cost accounting. In Chapter 1 we define accounting and distinguish between financial, management and cost accounting. This is followed by an examination of the role of management accounting in providing information to managers for decision-making, planning, control and performance measurement. In addition, the important changes that are taking place in the business environment are considered. Progression through the book will reveal how these changes are influencing management accounting systems. In Chapter 2 the basic cost terms and concepts that are used in the management accounting literature are described.

CHAPTER 1 INTRODUCTION TO MANAGEMENT ACCOUNTING
CHAPTER 2 AN INTRODUCTION TO COST TERMS AND CONCEPTS

Introduction to management accounting

There are many definitions of accounting, but the one that captures the theme of this book is the definition formulated by the American Accounting Association. It describes accounting as

> the process of identifying, measuring and communicating economic information to permit informed judgements and decisions by users of the information.

In other words, accounting is concerned with providing both financial and non-financial information that will help decision-makers to make good decisions. An understanding of accounting therefore requires an understanding of the decision-making process and an awareness of the users of accounting information.

During the past decade many organizations in both the manufacturing and service sectors have faced dramatic changes in their business environment. Deregulation combined with extensive competition from overseas companies in domestic markets has resulted in a situation where most companies are now competing in a highly competitive global market. At the same time there has been a significant reduction in product life cycles arising from technological innovations and the need to meet increasingly discriminating customer demands. To compete successfully in today's highly competitive global environment companies are making customer satisfaction an overriding priority, adopting new management approaches, changing their manufacturing systems and investing in new technologies. These changes are having a significant influence on management accounting systems. Progression through the book will reveal how these changes are influencing management accounting systems, but first of all it is important that you have a good background knowledge of some of the important changes that are occurring in the business environment. This chapter aims to provide such knowledge.

The objective of this first chapter is to provide the background knowledge that will enable you to achieve a more meaningful insight into the issues and problems of management accounting

Learning objectives

After studying this chapter, you should be able to:

- differentiate between management accounting, cost accounting and financial accounting;
- list and describe each of the seven factors involved in the decision-making, planning and control process;
- justify the view that, broadly, firms seek to maximize the present value of future net cash inflows;
- explain the factors that have influenced the changes in the competitive environment;
- outline the key success factors that directly affect customer satisfaction;
- describe the functions of a management accounting system.

that are discussed in the book. We begin by looking at the users of accounting information and identifying their requirements. This is followed by a description of the decision-making process and the changing business and manufacturing environment. Finally, the different functions of management accounting are described.

The users of accounting information

Accounting is a language that communicates financial and non-financial information to people who have an interest in an organization – managers, shareholders and potential investors, employees, creditors and the government. Managers require information that will assist them in their decision-making and control activities; for example, information is needed on the estimated selling prices, costs, demand, competitive position and profitability of various products that are made by the organization. Shareholders require information on the value of their investment and the income that is derived from their shareholding. Employees require information on the ability of the firm to meet wage demands and avoid redundancies. Creditors and the providers of loan capital require information on a firm's ability to meets its financial obligations. Government agencies like the Central Statistical Office collect accounting information and require such information as the details of sales activity, profits, investments, stocks, dividends paid, the proportion of profits absorbed by taxation and so on. In addition, the tax authorities need information on the amount of profits that are subject to taxation. All this information is important for determining policies to manage a country's economy.

Accounting information is not confined to business organizations. Accounting information about individuals is also important and is used by other individuals; for example, credit will only be extended to an individual after the prospective borrower has furnished a reasonable accounting of his or her private financial affairs. Non-profit-making organizations such as churches, charitable organizations, clubs and government units such as local authorities, also require accounting information for decision-making, and for reporting the results of their activities. For example, a tennis club will require information on the cost of undertaking its various activities so that a decision can be made as to the amount of the annual subscription that it will charge to its members. Similarly, local authorities need information on the costs of undertaking specific activities so that decisions can be made as to which activities will be undertaken and the resources that must be raised to finance them.

The foregoing discussion has indicated that there are many users of accounting information who require information for decision-making. The objective of accounting is to provide sufficient information to meet the needs of the various users at the lowest possible cost. Obviously, the benefit derived from using an information system for decision-making must be greater than the cost of operating the system.

An examination of the various users of accounting information indicates that they can be divided into two categories:

1. internal parties within the organization;
2. external parties such as shareholders, creditors and regulatory agencies, outside the organization.

It is possible to distinguish between two branches of accounting, that reflect the internal and external users of accounting information. Management accounting is concerned with

the provision of information to people within the organization to help them make better decisions and improve the efficiency and effectiveness of existing operations, whereas financial accounting is concerned with the provision of information to external parties outside the organization. Thus, management accounting could be called internal accounting and financial accounting could be called external accounting. This book concentrates on management accounting.

Differences between management accounting and financial accounting

The major differences between these two branches of accounting are:

- *Legal requirements.* There is a statutory requirement for public limited companies to produce annual financial accounts regardless of whether or not management regards this information as useful. Management accounting, by contrast, is entirely optional and information should be produced only if it is considered that the benefits from the use of the information by management exceed the cost of collecting it.
- *Focus on individual parts or segments of the business.* Financial accounting reports describe the whole of the business whereas management accounting focuses on small parts of the organization, for example the cost and profitability of products, services, customers and activities. In addition, management accounting information measures the economic performance of decentralized operating units, such as divisions and departments.
- *Generally accepted accounting principles.* Financial accounting statements must be prepared to conform with the legal requirements and the generally accepted accounting principles established by the regulatory bodies such as the Financial Accounting Standards Board (FASB) in the USA and the Accounting Standards Board (ASB) in the UK. These requirements are essential to ensure the uniformity and consistency that is needed for external financial statements. Outside users need assurance that external statements are prepared in accordance with generally accepted accounting principles so that the inter-company and historical comparisons are possible. In contrast, management accountants are not required to adhere to generally accepted accounting principles when providing managerial information for internal purposes. Instead, the focus is on the serving management's needs and providing information that is useful to managers relating to their decision-making, planning and control functions.
- *Time dimension.* Financial accounting reports what has happened in the past in an organization, whereas management accounting is concerned with *future* information as well as past information. Decisions are concerned with *future* events and management therefore requires details of expected *future* costs and revenues.
- *Report frequency.* A detailed set of financial accounts is published annually and less detailed accounts are published semi-annually. Management requires information quickly if it is to act on it. Consequently management accounting reports on various activities may be prepared at daily, weekly or monthly intervals.

The decision-making process

Because information produced by management accountants must be judged in the light of its ultimate effect on the outcome of decisions, a necessary precedent to an understanding of management accounting is an understanding of the *decision-making process.*

FIGURE 1.1 *The decision-making, planning and control process.*

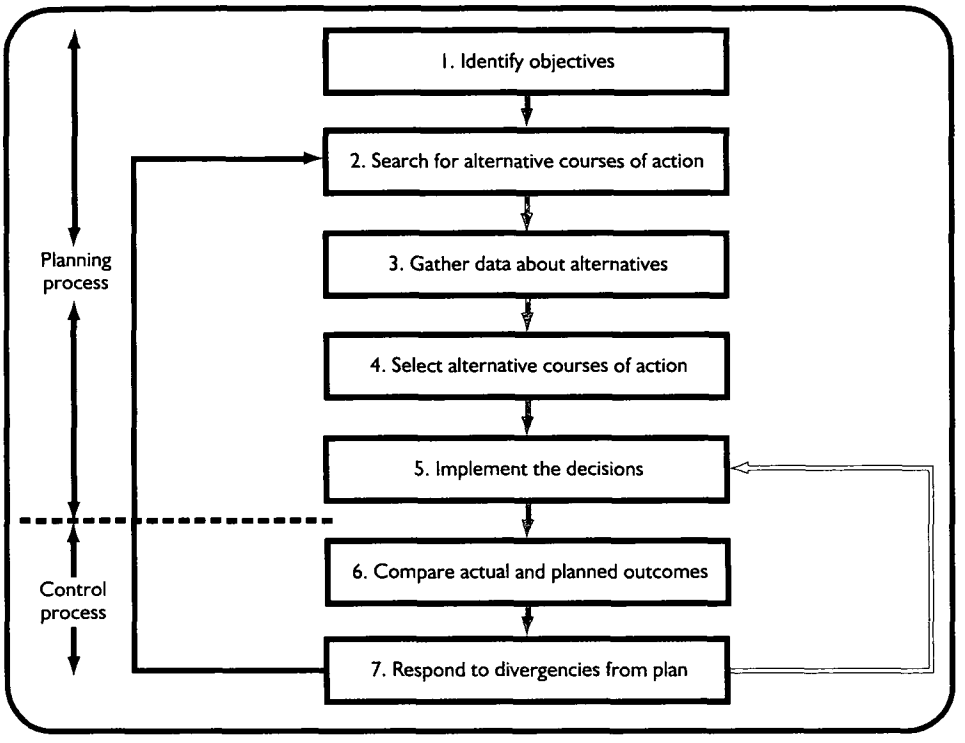

Figure 1.1 presents a diagram of a decision-making model. The first five stages represent the decision-making or the planning process. Planning involves making choices between alternatives and is primarily a decision-making activity. The final two stages represent the *control process*, which is the process of measuring and correcting actual performance to ensure that the alternatives that are chosen and the plans for implementing them are carried out. Let us now consider each of the elements of the decision-making and control process.

IDENTIFYING OBJECTIVES

Before good decisions can be made there must be some guiding aim or direction that will enable the decision-makers to assess the desirability of favouring one course of action over another. Hence, the first stage in the decision-making process should be to specify the goals or objectives of the organization.

Considerable controversy exists as to what the objectives of firms are or should be. Economic theory normally assumes that firms seek to maximize profits for the owners of the firm (the ordinary shareholders in a limited company) or, more precisely, the maximization of shareholders' wealth. Various arguments have been used to support the profit maximization objective. There is the legal argument that the ordinary shareholders are the owners of the firm, which therefore should be run for their benefit by trustee managers. Another argument supporting the profit objective is that profit maximization leads to the maximization of overall economic welfare. That is, by doing the best for yourself, you are unconsciously doing the best for society. Moreover, it seems a reasonable belief that the interests of firms will be better served by a larger profit than by a smaller profit, so that maximization is at least a useful approximation.

Some writers (e.g. Simon, 1959) believe that businessmen are content to find a plan that provides satisfactory profits rather than to maximize profits. Because people have limited powers of understanding and can deal with only a limited amount of information at a time (Simon uses the term **bounded rationality** to describe these constraints), they tend to search for solutions only until the first acceptable solution is found. No further attempt is made to find an even better solution or to continue the search until the best solution is discovered. Such behaviour, where the search is terminated on finding a satisfactory, rather than optimal solution, is known as **satisficing**.

Cyert and March (1969) have argued that the firm is a coalition of various different groups – shareholders, employees, customers, suppliers and the government – each of whom must be paid a minimum to participate in the coalition. Any excess benefits after meeting these minimum constraints are seen as being the object of bargaining between the various groups. In addition, a firm is subject to constraints of a societal nature. Maintaining a clean environment, employing disabled workers and providing social and recreation facilities are all examples of social goals that a firm may pursue.

Clearly it is too simplistic to say that the only objective of a business firm is to maximize profits. Some managers seek to establish a power base and build an empire; another goal is security; the removal of uncertainty regarding the future may override the pure profit motive. Nevertheless, the view adopted in this book is that, broadly, firms seek to maximize the value of future net cash inflows (that is, future cash receipts less cash payments) or to be more precise the present value of future net cash inflows.[1] This is equivalent to maximizing shareholder value. (The concept of present value is explained in Chapter 9.) The reasons for choosing this objective are as follows:

1. It is unlikely that any other objective is as widely applicable in measuring the ability of the organization to survive in the future.
2. It is unlikely that maximizing the present value of future cash flows can be realized in practice, but by establishing the principles necessary to achieve this objective you will learn how to increase the present value of future cash flows.
3. It enables shareholders as a group in the bargaining coalition to know how much the pursuit of other goals is costing them by indicating the amount of cash distributed among the members of the coalition.

THE SEARCH FOR ALTERNATIVE COURSES OF ACTION

The second stage in the decision-making model is a search for a range of possible courses of action (or **strategies**) that might enable the objectives to be achieved. If the management of a company concentrates entirely on its present product range and markets, and market shares and cash flows are allowed to decline, there is a danger that the company will be unable to generate sufficient cash flows to survive in the future. To maximize future cash flows, it is essential that management identifies potential opportunities and threats in its current environment and takes specific steps immediately so that the organization will not be taken by surprise by any developments which may occur in the future. In particular, the company should consider one or more of the following courses of action:

1. developing *new* products for sale in *existing* markets;
2. developing *new* products for *new* markets;
3. developing *new* markets for *existing* products.

The search for alternative courses of action involves the acquisition of information concerning future opportunities and environments; it is the most difficult and important stage of the decision-making process. Ideally, firms should consider all alternative courses of action, but, in practice they consider only a few alternatives, with the search process being localized initially. If this type of routine search activity fails to produce satisfactory solutions, the search will become more widespread (Cyert and March, 1969). We shall examine the search process in more detail in Chapter 10.

GATHER DATA ABOUT ALTERNATIVES

When potential areas of activity are identified, management should assess the potential growth rate of the activities, the ability of the company to establish adequate market shares, and the cash flows for each alternative activity for various states of nature. Because decision problems exist in an uncertain environment, it is necessary to consider certain factors that are outside the decision-maker's control, which may occur for each alternative course of action. These uncontrollable factors are called states of nature. Some examples of possible states of nature are economic boom, high inflation, recession, the strength of competition and so on.

The course of action selected by a firm using the information presented above will commit its resources for a lengthy period of time, and how the overall place of the firm will be affected within its environment – that is, the products it makes, the markets it operates in and its ability to meet future changes. Such decisions dictate the firm's long-run possibilities and hence the type of decisions it can make in the future. These decisions are normally referred to as long-run or strategic decisions. Strategic decisions have a profound effect on the firm's future position, and it is therefore essential that adequate data are gathered about the firm's capabilities and the environment in which it operates. We shall discuss this topic in Chapters 9 and 10. Because of their importance, strategic decisions should be the concern of top management.

Besides strategic or long-term decisions, management must also make decisions that do not commit the firm's resources for a lengthy period of time. Such decisions are known as short-term or operating decisions and are normally the concern of lower-level managers. Short-term decisions are based on the environment of today, and the physical, human and financial resources presently available to the firm. These are, to a considerable extent, determined by the quality of the firm's long-term decisions. Examples of short-term decisions include the following.

1. What selling prices should be set for the firm's products?
2. How many units should be produced of each product?
3. What media shall we use for advertising the firm's products?
4. What level of service shall we offer customers in terms of the number of days required to deliver an order and the after-sales service?

Data must also be gathered for short-term decisions; for example, data on the selling prices of competitors' products, estimated demand at alternative selling prices, and predicted costs for different activity levels must be assembled for pricing and output decisions. When the data have been gathered, management must decide which courses of action to take.

SELECT APPROPRIATE ALTERNATIVE COURSES OF ACTION

In practice, decision-making involves choosing between competing alternative courses of action and selecting the alternative that best satisfies the objectives of an organization. Assuming that our objective is to maximize future net cash inflows, the alternative selected should be based on a comparison of the differences between the cash flows. Consequently, an incremental analysis of the net cash benefits for each alternative should be applied. The alternatives are ranked in terms of net cash benefits, and those showing the greatest benefits are chosen subject to taking into account any qualitative factors. We shall discuss how incremental cash flows are measured for short-term and long-term decisions and the impact of qualitative factors in Chapters 4–9.

IMPLEMENTATION OF THE DECISIONS

Once alternative courses of action have been selected, they should be implemented as part of the budgeting process. The **budget** is a financial plan for implementing the various decisions that management has made. The budgets for all of the various decisions are expressed in terms of cash inflows and outflows, and sales revenues and expenses. These budgets are merged together into a single unifying statement of the organization's expectations for future periods. This statement is known as a **master budget**. The master budget consists of a budgeted profit and loss account, cash flow statement and balance sheet. The budgeting process communicates to everyone in the organization the part that they are expected to play in implementing management's decisions. Chapter 10 focuses on the budgeting process.

COMPARING ACTUAL AND PLANNED OUTCOMES AND RESPONDING TO DIVERGENCIES FROM PLAN

The final stages in the process outlined in Figure 1.1 of comparing actual and planned outcomes and responses to divergencies from plan represent the firm's control process. The managerial function of **control** consists of the measurement, reporting and subsequent correction of performance in an attempt to ensure that the firm's objectives and plans are achieved. In other words, the objective of the control process is to ensure that the work is done so as to fulfil the original intentions.

To monitor performance, the accountant produces **performance reports** and presents them to the appropriate managers who are responsible for implementing the various decisions. Performance reports consisting of a comparison of actual outcomes (actual costs and revenues) and planned outcomes (budgeted costs and revenues) should be issued at regular intervals. Performance reports provide **feedback** information by comparing planned and actual outcomes. Such reports should highlight those activities that do not conform to plans, so that managers can devote their scarce time to focusing on these items. This process represents the application of **management by exception**. Effective control requires that corrective action is taken so that actual outcomes conform to planned outcomes. Alternatively, the plans may require modification if the comparisons indicate that the plans are no longer attainable.

The process of taking corrective action so that actual outcomes conform to planning outcomes, or the modification of the plans if the comparisons indicate that actual outcomes do not conform to planned outcomes, is indicated by the arrowed lines in Figure 1.1 linking stages 7 and 5 and 7 and 2. These arrowed lines represent '**feedback loops**'. They

signify that the process is dynamic and stress the interdependencies between the various stages in the process. The feedback loop between stages 7 and 2 indicates that the plans should be regularly reviewed, and if they are no longer attainable then alternative courses of action must be considered for achieving the organization's objectives. The second loop stresses the corrective action taken so that actual outcomes conform to planned outcomes. Chapters 10–13 focus on the planning and control process.

Changing competitive environment

Prior to the 1980s many organizations in Western countries operated in a protected competitive environment. Barriers of communication and geographical distance, and sometimes protected markets, limited the ability of overseas companies to compete in domestic markets. There was little incentive for firms to maximize efficiency and improve management practices, or to minimize costs, as cost increases could often be passed on to customers. During the 1980s, however, manufacturing organizations began to encounter severe competition from overseas competitors that offered high-quality products at low prices. By establishing global networks for acquiring raw materials and distributing goods overseas, competitors were able to gain access to domestic markets throughout the world. To be successful companies now have to compete not only against domestic competitors but also against the best companies in the world.

Excellence in manufacturing can provide a competitive weapon to compete in sophisticated world-wide markets. In order to compete effectively companies must be capable of manufacturing innovative products of high quality at a low cost, and also provide a first-class customer service. At the same time, they must have the flexibility to cope with short product life cycles, demands for greater product variety from more discriminating customers and increasing international competition. World-class manufacturing companies have responded to these competitive demands by replacing traditional production systems with new just-in-time production systems and investing in advanced manufacturing technologies (AMTs). The major features of these new systems and their implications for management accounting will be described throughout the book.

Virtually all types of service organization have also faced major changes in their competitive environment. Before the 1980s many service organizations, such as those operating in the airlines, utilities and financial service industries, were either government-owned monopolies or operated in a highly regulated, protected and non-competitive environment. These organizations were not subject to any great pressure to improve the quality and efficiency of their operations or to improve profitability by eliminating services or products that were making losses. Furthermore, more efficient competitors were often prevented from entering the markets in which the regulated companies operated. Prices were set to cover operating costs and provide a predetermined return on capital. Hence cost increases could often be absorbed by increasing the prices of the services. Little attention was therefore given to developing cost systems that accurately measured the costs and profitability of individual services.

Privatization of government-controlled companies and deregulation in the 1980s completely changed the competitive environment in which service companies operated. Pricing and competitive restrictions have been virtually eliminated. Deregulation, intensive competition and an expanding product range created the need for service organizations to focus on cost management and develop management accounting information systems that enabled them to understand their cost base and determine the sources of profitability for their products, customers and markets. Many service organizations have only recently turned their attention to management accounting.

Changing product life cycles

A **product's life cycle** is the period of time from initial expenditure on research and development to the time at which support to customers is withdrawn. Intensive global competition and technological innovation combined with increasingly discrimating and sophisticated customer demands have resulted in a dramatic decline in product life cycles. To be successful companies must now speed up the rate at which they introduce new products to the market. Being later to the market than the competitors can have a dramatic effect on product profitability.

In many industries a large fraction of a product's life-cycle costs are determined by decisions made early in its life cycle. This has created a need for management accounting to place greater emphasis on providing information at the design stage because many of the costs are committed or locked in at this time. Therefore to compete successfully companies must be able to manage their costs effectively at the design stage, have the capability to adapt to new, different and changing customer requirements and reduce the time to market of new and modified products.

Focus on customer satisfaction and new management approaches

In order to compete in today's competitive environment companies are having to become more 'customer-driven' and make customer satisfaction an overriding priority. Customers are demanding ever-improving levels of service in cost, quality, reliability, delivery, and the choice of innovative new products. Figure 1.2 illustrates this focus on customer satisfaction as the overriding priority. In order to provide customer satisfaction organizations must concentrate on those key success factors that directly affect it. Figure 1.2 identifies cost efficiency, quality, time and innovation as the key success factors. In addition to concentrating on these factors organizations are adopting new management approaches in their quest to achieve customer satisfaction. These new approaches are illustrated in Figure 1.2. They are continuous improvement, employee empowerment and total value-chain analysis. Let us now examine each of the items shown in Figure 1.2 in more detail.

Since customers will buy the product with the lowest price, all other things being equal, keeping costs low and being **cost efficient** provides an organization with a strong competitive advantage. Increased competition has also made decision errors due to poor cost information more probable and more costly. If the cost system results in distorted product costs being reported, then overcosted products will lead to higher bid prices and business lost to those competitors who are able to quote lower prices purely because their cost systems produce more accurate cost information. Alternatively, there is a danger that undercosted profits will result in the acceptance of unprofitable business.

These developments have made many companies aware of the need to improve their cost systems so that they can produce more accurate cost information to determine the cost of their products, pinpoint loss-making activities and analyse profits by products, sales outlets, customers and markets.

In addition to demanding low cost product customers are demanding high quality products and services. Most companies are responding to this by focusing on **total quality management** (TQM). The goal of TQM is customer satisfaction. TQM is a term used to describe a situation where *all* business functions are involved in a process of continuous quality improvement. TQM has broadened from its early concentration on the statistical