COST ACCOUNTING

JAWAHAR LAL

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Preface

This book has been written to serve as a text and provides a vigorous and interesting coverage of the topics in a simple manner. It is designed to help students understand the role of cost accounting, a subject of considerable interest and utility, in accomplishing three broad objectives: (i) cost ascertainment; (ii) cost analysis and cost control; and (iii) managerial decision-making. To achieve these objectives, the contents of the text have been divided into five parts. Part I explains the objectives and role of cost accounting, and basic cost concepts. Part II emphasises the basic elements of cost and Part III discusses cost accumulation and costing systems. Part IV is devoted to a discussion on the foundations of managerial planning, control and, decision-making. Part V discusses some independent topics which are important in cost accounting.

Part I consists of two chapters which cover the basic concepts and techniques in depth before a student is exposed to the more vital areas of cost accounting.

Chapter 1 deals with cost accounting, financial accounting, objectives of cost accounting and the cost accounting department.

Chapter 2 provides a survey of basic cost concepts, such as fixed cost, variable cost, semi-variable cost, direct cost, indirect cost, product cost, period cost, opportunity cost, sunk cost, differential cost, joint cost, common cost, and other cost concepts.

Part II is devoted to the basic elements of cost.

Chapters 3, 4, 5, 6 and 7 discuss in detail each of the components making up the cost of goods manufactured—materials, labour, overhead costs, and expenses.

Part III explains the approaches to product cost accounting, i.e. the basic cost systems. It also stresses methods of accounting systems—integrated and non-integrated.

Chapters 8, 9, 10 and 11 describe in great detail cost accumulation methods, such as single costing, job costing, process costing, and operating costing respectively.

Chapters 12, 13, 14 and 15 are devoted to cost control accounts, reconciliation of cost and financial accounts, integrated accounts, and uniform costing and inter-firm comparison.

Part IV consists of four chapters whose principal emphasis is on the internal uses of cost accounting data for managerial planning, control and decision-making.

Chapters 16, 17, 18 and 19 cover and make an in-depth study of budgeting, standard costing and variance analyses, variable costing, and decision-making problems.

Part V comprises four independent chapters which cover a few but important areas in cost accounting.

Chapters 20, 21, 22 and 23 explain responsibility accounting and cost control, marketing cost analyses and decisions, mechanised accounting, cost audit and costing requirements.

I strongly believe that cost accounting books available at present in India and used by the students, both university and professional, have not responded adequately and satisfactorily to their changing requirements and objectives. Most such books lack relevant, up-to-date and adequate material, logical presentation, practical problems, and satisfactory explanation of basic cost accounting concepts, cost analysis, and managerial uses of cost accounting data.

The present book not only avoids the limitation of these presently available books, but also has several features to help students adequately in their academic and professional courses. Basically, it aims at achieving the following important objectives:

(i) Detailed coverage of all topics and related subject matter in cost accounting.
(ii) Adequate flexibility to fulfil the needs of different university and professional courses in cost accounting which vary in terms of coverage and emphasis.
(iii) Simple, clear and logical presentation, and an integrated approach to the study of cost accounting, making the subject appear as one comprehensive unit.
(iv) A wide range of illustrations beginning with simple ones and subsequently presenting complex problems. This will help create confidence among students and encourage them to accept challenges later.
(v) A wide range of thought-provoking questions and problems varying in content, length and difficulty. Most problems are new and have been taken from university and professional examinations, such as B Com (Hons.), B Com, M Com, CA, ICWA, ICMA (UK), etc.
(vi) Coordination between the questions and problems at the end of each chapter and the discussions and explanations presented in the body of the chapter. This facilitates the learning process among students and increases understanding of the subject.
(vii) A list of selected references at the end of the book drawn from a diverse set of recently published material in India and abroad.

The present book will be very useful for the following courses:

(i) B Com and M Com examinations.
(ii) The Institute of Chartered Accountants of India examinations (Intermediate and Final)
(iii) The Institute of Cost and Works Accountants of India examinations (Intermediate and Final)
(iv) Company Secretaries examination
(v) Master of Business Administration (MBA) examination
(vi) Other professional examinations

I am grateful to numerous persons and friends who have given valuable suggestions in the course of writing this text. The materials found in an existing source and used in the book have been duly acknowledged. I appreciate the permissions given by various publishers to use the published materials in this text.

To my wife Pratibha, and my children Sanjay, Seema and Rajnish, I acknowledge a special debt. Their constant support, encouragement and patience have greatly eased my burden and made this project possible.

I sincerely welcome criticisms, views and suggestions from readers for improvement of this text.

JAWAHAR LAL

Contents

Part One

BASIC NATURE AND CONCEPTS

1

Nature of Cost Accounting

Modern business needs frequent information about business activities to plan accurately for the future to control business results, and to make a proper appraisal of the performances of persons working in an organisation. The fulfilment of these goals requires that the data about the costs incurred and benefits (revenues) obtained should be collected and developed into useful reports and statements. This is achieved by what is now known as "cost accounting". In comparison, financial data is accumulated for the purpose of external financial reporting to meet the needs of those who have an interest in the enterprise but who are not charged with direct responsibility for its day-to-day operations. External reporting is taken care of by what is generally known as "financial accounting". Financial accounting does not provide management with cost and revenue information relevant to its needs and thus is unable to accomplish the objectives of cost accounting. Before examining the nature and contribution of cost accounting it would be appropriate to discuss the nature of financial accounting and its limitations in greater detail.

FINANCIAL ACCOUNTING

Financial accounting is concerned with providing information to external users. It refers to the preparation of general purpose reports for use by persons outside a business enterprise, such as shareholders (existing and potential), creditors, financial analysts, labour unions, government authorities, and the like. Financial accounting is oriented towards the preparation of financial statements which summarise the results of operations for selected periods of time and show the financial position of the business at particular dates. It involves the recording, classifying and summarising of the effects of internal events and external transactions. The following six points are important to understand the scope and nature of financial accounting:

Objectives

The Committee[1] on A Statement of Basic Accounting Theory concludes that the objectives of accounting are to provide information for the following purposes:

1. Making decisions concerning the use of limited resources, including the identification of crucial decision areas, and determination of objectives and goals.
2. Effectively directing and controlling an organisation's human and material resources.
3. Maintaining and reporting on the custodianship of resources.
4. Facilitating social functions and controls.

[1]American Accounting Association, *A Statement of Basic Accounting Theory*, 1966, Florida, p. 4.

Decisions involving limited resources are made by individuals acting on their own behalf, such as the shareholders, creditors, financial analysts and others. In the area of internal management, financial accounting information may be helpful to management in performing various business activities. The interests of society are paramount in defining the function of stewardship or custodianship. Society, in a broad sense, assigns to companies the responsibility of employing efficiently the resources which are at its disposal and, in turn, it rightly expects an account from companies. Other social functions in which accounting plays important roles include taxation, the prevention of fraud, governmental regulation, stimulation of commerce, management-labour relations, and preparation of statistics on economic activity for the use of all interested persons.

Contents

The end product of the financial accounting process are the financial statements that communicate useful information to decision-makers. The financial statements reflect a combination of recorded facts, accounting conventions and personal judgements of the preparers. There are two primary financial statements for a profit-making entity in India, viz., the Income Statement (statement of revenues, expenses and profit), and the Balance Sheet (statement of assets, liabilities and owners' equity). In the U.S.A., the Statements of Changes in Financial Position (statement of working capital or cash inflows and outflows) is now mandatory and has to be prepared along with the Income Statement and Balance Sheet. The accounting information[2] generated by financial accounting is quantitative, formal, structured, numerical and post-oriented material.[3]

Accounting System

The accounting system includes the various techniques and procedures used by the accountant (preparer) in measuring, describing and communicating financial data to users. Journals, ledgers and other accounting techniques used in processing financial accounting information depend upon the concept of the double-entry system. This technique includes generally accepted accounting principles (GAAP).[4] The standard of generally accepted accounting principles includes not only broad guidelines of general application but also detailed practices and procedures.

Measurement Unit

Financial accounting is primarily concerned with measurement of economic resources and obligations and changes in them. Financial accounting measures in terms of monetary units of a society in which it operates. For example, the common denominator or yardstick used for accounting measurement is the rupee in India and dollar in the U.S.A. The assumption is that the rupee or the dollar is a useful measuring unit.

Users of Financial Accounting Information

As stated earlier, financial accounting information is intended primarily to serve external users. The Financial Accounting Standards Board of the

[2]The accounting information in a very broad sense means "economic information". See American Accounting Association's *Committee Report on Basic Auditing Concepts*. Supplement to the Accounting Review, 1972, p. 23.

[3]Thomas R. Hofstedt, "Some Behavioural Parameters of Financial Analysis", *The Accountiug Review*, October 1972, p. 680.

[4]Generally Accepted Accounting Principles (GAPP) encompass the conventions, rules and procedures necessary to define accepted accounting practice at a particular time.

U.S.A. observes that financial accounting should provide information that is useful to present and potential investors and creditors and other users for making rational investments, credit and similar decisions.[5] Financial accounting information is used by a variety of groups and for diverse purposes. Some users have direct interest in reported information. Examples of such users are owners, creditors and suppliers, potential owners, suppliers, management, tax authorities, employees, customers. Some users need financial accounting information to help those who have direct interest in a business enterprise. Examples of such users are financial analysts and advisers, stock exchanges, financial press and reporting agencies, trade associations, labour unions. These user groups having direct/indirect interest have different objectives and diverse informational needs. The emphasis in financial accounting has been on general-purpose information[6] which, obviously, is not intended to satisfy any specialised needs of individual users or specific user groups.

LIMITATIONS OF FINANCIAL ACCOUNTING

Financial accounting is significant for managements as it helps them to direct and control the firm activities. It also helps business managements in determining appropriate managerial policies in different areas, such as production, sales, administration and finance. However, financial accounting does not provide adequate and useful information regarding different segments or divisions of the firm. Financial accounting suffers from the following limitations which have been responsible for the emergence of cost accounting:

1. Financial accounting does not provide detailed cost information for different departments, processes, products, jobs in the production divisions. Similarly separate cost data are not available for different services and functions in the administration division. Management may need information about different products, sales territories and sales activities which are also not available in financial accounting.

2. Financial accounting does not set up a proper system of controlling materials and supplies. Undoubtedly, if material and supplies are not controlled in a manufacturing concern, they will lead to losses on account of misappropriation, misutilisation, scrap, defectives, etc. They may, in turn, influence the reported net income of a business enterprise.

3. The recording and accounting for wages and labour is not done for different jobs, processes, products, departments. This creates problems in analysing the cost associated with different activities. This also does not provide a basis for rewarding workers and employees for the above-average performance.

4. It is difficult to know the behaviour of costs in financial accounting as expenses are not assigned to the product at each stage of production. Expenses are not classified into direct and indirect[7] and therefore cannot be classified as controllable and uncontrollable. Control of cost which is the most important objective of all business enterprise, cannot be achieved with the aid of financial accounting alone.

5. Financial accounting does not possess an adequate system of standards to evaluate the performance of departments and employees working in the departments. Standardisation is now applied to all elements of business.

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[5]Financial Accounting Standards Board, *Objectives of Financial Reporting by Business Enterprises*, Statement of Financial Accounting Concepts No. 1, FASB, 1978, para 34.

[6]Accounting Principles Board, Statement No. 4, *Basic Concepts and Accounting Principles underlying Financial Statements of Business Enterprises*, AICPA, October 1970, pp. 18-19.

[7]The direct and indirect costs have been fully discussed in Chapter 2.

Standards need to be developed for materials, labour and overheads so that a firm can compare the work of labourers, workers, supervisors and executives with what should have been done in an allotted period of time.

6. Financial accounting contains historical cost information which is accumulated at the end of the accounting period. This accounting does not provide day-to-day information about costs and expenses. This is the reason why much dissatisfaction has been shown with external financial reporting. The historical cost is not a reliable basis for predicting future earnings, solvency, or overall managerial effectiveness. Historical cost information is relevant but not adequate for all purposes. It is now rightly contended that current cost information should be reported along with historical cost information.

7. Financial accounting does not provide information to analyse the losses due to various factors, such as idle plant and equipment, seasonal fluctuations in volume of business, etc. It does not help management in taking important decisions about expansion of business, dropping of a product line, starting a new product, alternative methods of production, improvement in product, etc. The managerial decisions about these business matters have now become vital to the survival and growth of business enterprises.

8. Financial accounting does not provide cost data to determine the price of the product being manufactured or the service being rendered to the consumers. It is also not possible to prepare detailed cost reports for the purpose of comparison and analysis between two periods of time within an enterprise and also for making inter-firm comparison.

In spite of the above limitations, financial accounting has utility and will continue to be used in the future also. It is an important and conceptually rich area. Because of growing business complexities and advances in knowledge of human behaviour and decision processess, the scope and methods of financial accounting are changing and can be expected to continue to change. In the light of these developments, financial accounting theory and practice will probably be broadened considerably in the future.

NATURE OF COST ACCOUNTING

Cost accounting, as a tool of management, is an integral part of the management process. It provides management with detailed records of the costs relating to products, operations or functions. Cost accounting refers to the process of determining the cost of some particular product or activity. The Institute of Cost and Works Accountants (ICWA) (U.K.) defines cost accounting as

> . . . the process of accounting for cost from the point at which expenditure is incurred or committed to the establishment of its ultimate relationship with cost centres and cost units. In its widest usage it embraces the preparation of statistical data, the application of cost control methods and the ascertainment of the profitability of activities carried out or planned.

Stallmen and Russell[8] define cost accounting as

> . . . that portion of the accounting discipline concerned with the development of cost information related to the activities of an economic entity. This cost information may be estimated future costs developed for planning purposes, or accumulated actual costs directed toward the evaluation of performance. It may emerge somewhat routinely out of a carefully designed system which has been developed to provide information regarding recurring activities, or be the result of a special cost study directed to an objective not considered in the design of the regular system.

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[8]James C. Stallmen, and T. Alan Russell, in A. Black Homer and Don Edwards James (Eds), *The Managerial and Cost Accountant's Handbook*, Illinois, Dow Jones-Irwin, 1979, p. 4.

According to Morse,[9]

> Cost accounting is the processing and evaluation of monetary and non-monetary data to provide information for external reporting, internal planning and control of business operations and special analysis and decisions.

The control of business operations in an enterprise is achieved through an accounting system that records relevant data about production and other activities on a regular basis and reports these data to management for managing the undertaking. In addition, cost accounting provides data on the costs incurred in the distribution of product, and in the administration of the organisation. Thus cost accounting consists of the methods and procedures applied to ascertain actual costs for the activities/operations performed in a business enterprise. It includes the recording and reporting forms and procedures as well as the principles for cost measurement. Cost accounting provides as means of evaluating a proposed activity/goal by analysing its different cost-generating components and determining cost estimates for those components and for the overall activity. It is essential that the cost accounting system designed and used to accumulate costs and report business activities should fulfil the needs of management, and in the future, should be adaptable to the changing industry and specific requirements and management style.

COST ACCOUNTANCY

Cost accounting has been differentiated from cost accountancy. The Institute of Cost and Works Accountants of the U.K. has defined cost accountacy as the "application of costing and cost accounting principles, methods and techniques to the science, art and practice of cost control and ascertainment of profitability as well as presentation of information for the purpose of managerial decision-making." According to this definition the term "cost accountancy" includes costing, cost accounting, budgetary control, cost control and cost audit. Although literature in the U.K. and Europe in the area of cost accounting tends to differentiate between cost accounting and cost accountancy, U.S. literature does not appear to point out any basic difference between these two terms.

COSTING

Cost Accounting and Costing have distinctly different meanings. The Institute of Cost and Management Accountants (ICMA) London has defined costing as the ascertainment of costs. This includes the techniques and processes of ascertaining costs. The technique refers to principles and rules which are applied for ascertaining costs of products manufactured and services rendered. The process includes the day-to-day routine of determining costs. Different types of costing are used in different industries, such as historical costing, marginal costing, direct costing, absorption costing, uniform costing, standard costing. Staubus[10] says,

> Costing is the process of determining the cost of doing something, e.g., the cost of manufacturing an article, rendering a service, or performing a function. The article manufactured, service rendered, or function performed is known as the object of costing. Objects of costing are always activities. We want to know the cost of doing something. We may, however, find ourselves speaking of the cost of a product as an abbreviation for the cost of acquiring or manufacturing that product.

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[9]Waney J. Morse, *Cost Accounting*, Massachusetts, Addition Wesley Publishing Company, 1978, p. 10.

[10]George J. Staubus, *Activity Costing and Input-Output Accounting*, Homewood: Richard D. Irwin, Inc., 1971, p. 1.

COST ACCOUNTING AND MANAGEMENT

Present-day business managements involve complexities and economic constraints. Management, therefore, requires adequate, systematic and useful cost data and reports to manage a business enterprise and to achieve business objectives. The useful information provided by cost records and reports will help management in the following important areas: (i) establishing the business enterprise's profit goal; (ii) determining departmental goals and targets which direct operations in accordance with the overall goal of the business enterprise; (iii) measuring and controlling business performances with the help of budgets and standards; (iv) deciding about improvements and adjustments in the business operations essential to achieve defined business and profit objectives; and (v) to coordinate entire organisational efforts and tasks. Cost accounting assists management by performing the following important tasks:

1. Cost accounting helps in determination and analysis of costs and income of a business enterprise so that comparisons by divisions and periods of time can be made in order to evaluate the operating efficiency of each division/segment/product. Cost accounting develops and maintains adequate procedures and methods to record costs and income by departments, processes, jobs, products, sales territories, sales order. The collection, classification and analysis of cost and income data can be made from different angles to know the relationship of cost with specific distinct activities. This advantage is not available to manufacturing companies alone. In fact, the analysis of cost and income can be made in almost all types of organisations—profit or non-profit.

The example given below points out how cost accounting by products, may reveal facts and data which cannot be developed in financial accounting. In this example, historical costs are produced at the same time as financial accounts. Cost statements produced at regular, short intervals would have enabled the firm to take prompt action to overcome the problems of producing and selling product C.

Trading and Profit and Loss Account

Dr. Cr.

Particulars	*Amount*	*Particulars*	*Amount*
Raw Materials	1,02,000	Sales	2,00,000
Wages	40,000		
Direct Expenses	8,000		
Gross Profit	50,000		
	2,00,000		2,00,000
Administrative and Other Expenses	20,000	Gross Profit	50,000
Net Profit	30,000		
	50,000		50,000

The analysis (based on cost statements) points out that the contribution of firm products to total net profit (15%) vary significantly among products. Product C does not cover its prime costs, and causes a net loss to the firm of Rs. 8,000 in the year; its selling and distribution costs are also particularly more compared to the other products.