MANAGERIAL ACCOUNTING

JAWAHAR LAL

Himalaya Publishing House

MANAGERIAL ACCOUNTING

PROFESSOR JAWAHAR LAL
Formerly Head, Department of Commerce,
Formerly Dean, Faculty of Commerce & Business
Delhi School of Economics,
University of Delhi,
Delhi.

Fourth Revised Edition : 2011

Himalaya Publishing House
MUMBAI • NEW DELHI • NAGPUR • BENGALURU • HYDERABAD • CHENNAI • PUNE • LUCKNOW • AHMEDABAD
• ERNAKULAM • BHUBANESWAR • INDORE • KOLKATA • GUWAHATI

First Edition	:	**1996**
Second Revised Edition	:	**1999**
Third Revised Edition	:	**2001**
Reprint	:	**2002**
Reprint	:	**2005**
Reprint	:	**2007**
Reprint	:	**2008**
Fourth Revised Edition	:	**2011**

Published by : Mrs. Meena Pandey for **Himalaya Publishing House Pvt. Ltd.,**
"Ramdoot", Dr. Bhalerao Marg, Girgaon, **Mumbai - 400 004.**
Phone: 022-23860170/23863863, Fax: 022-23877178
E-mail: himpub@vsnl.com; Website: www.himpub.com

Branch Offices :

New Delhi : "Pooja Apartments", 4-B, Murari Lal Street, Ansari Road, Darya Ganj, New Delhi - 110 002. Phone: 011-23270392, 23278631; Fax: 011-23256286

Nagpur : Kundanlal Chandak Industrial Estate, Ghat Road, Nagpur - 440 018. Phone: 0712-2738731, 3296733; Telefax: 0712-2721215

Bengaluru : No. 16/1 (Old 12/1), 1st Floor, Next to Hotel Highlands, Madhava Nagar, Race Course Road, Bengaluru - 560 001. Phone: 080-32919385; Telefax: 080-22286611

Hyderabad : No. 3-4-184, Lingampally, Besides Raghavendra Swamy Matham, Kachiguda, Hyderabad - 500 027. Phone: 040-27560041, 27550139; Mobile: 09848130433

Chennai : No. 85/50, Bazullah Road, T. Nagar, Chennai - 600 017. Phone: 044-28144004/28144005

Pune : First Floor, "Laksha" Apartment, No. 527, Mehunpura, Shaniwarpeth (Near Prabhat Theatre), Pune - 411 030. Phone: 020-24496323/24496333

Lucknow : Jai Baba Bhavan, Church Road, Near Manas Complex and Dr. Awasthi Clinic, Aliganj, Lucknow - 226 024. Phone: 0522-2339329, 4068914; Mobile: 09305302158, 09415349385, 09389593752

Ahmedabad : 114, "SHAIL", 1st Floor, Opp. Madhu Sudan House, C.G. Road, Navrang Pura, Ahmedabad - 380 009. Phone: 079-26560126; Mobile: 09327324149, 09314679413

Ernakulam : 39/104 A, Lakshmi Apartment, Karikkamuri Cross Rd., Ernakulam, Cochin - 622011, Kerala. Phone: 0484-2378012, 2378016; Mobile: 09344199799

Bhubaneswar : 5 Station Square, Bhubaneswar (Odisha) - 751 001. Mobile: 09861046007

Indore : Kesardeep Avenue Extension, 73, Narayan Bagh, Flat No. 302, IIIrd Floor, Near Humpty Dumpty School, Narayan Bagh, Indore - 452 007 (M.P.). Mobile: 09301386468

Kolkata : 108/4, Beliaghata Main Road, Near ID Hospital, Opp. SBI Bank, Kolkata - 700 010, Phone: 033-32449649, Mobile: 09910440956

Guwahati : House No. 15, Behind Pragjyotish College, Near Sharma Printing Press, P.O. Bharalumukh, Guwahati - 781009. (Assam). Mobile: 09883055590, 09883055536

DTP by : Sudhakar Shetty (HPH Pvt. Ltd., Mumbai)

Printed by : A to Z Printer, New Delhi.

PREFACE

Management accounting deals with the development and use of accounting information by different organisations for the purpose of decision making, planning, control and performance evaluation. The field of management accounting has been influenced greatly by competitive and complex business environment. This requires that management accounting as a discipline should help the managers who are faced with managerial problems in their organisations. Managers of Indian companies need to make business decisions with sound knowledge and understanding of use of accounting information for the efficient and profitable functioning of their enterprises.

The text 'Managerial Accounting' focuses on the uses of managerial accounting information to resolve different managerial issues emerging in different organisations. The book makes a comprehensive coverage of important topics, current trends in management accounting and presents the concepts, techniques and use of accounting information in a clear, concise and logical manner.

The book is structured in five parts.

Part One 'Fundamentals' introduces the subject of Management Accounting and Cost Accounting and focuses on Nature of Management and Cost Accounting, Cost Concepts and Classifications.

Part Two has Cost Accumulation Systems as the focal point and discusses Job Costing, Contract Costing, Process Costing, Operating Costing, Activity Based Costing.

Part Three is devoted to Managerial Decision Making and presents discussion on Variable (Marginal) Costing, Cost-Volume-Profit Analysis, Decisions Involving Alternative Choices.

Part Four focuses on Planning and Control and covers the topics of Budgeting, Standard Costing and Variance Analysis.

Part Five looks at some specialised topics relevant to Management Accounting function of an organization and provides exposure on Responsibility Accounting and Transfer Pricing, Contemporary Issues in Cost and Management Accounting, Cost Audit and Cost Accounting Standards, and Financial Statement Analysis.

The book contains many pedagogical features to give a balanced blend of conceptual framework, managerial accounting techniques and practical use of accounting information. Some of the pedagogical features are:

- Comprehensive and uptodate coverage of the subject.
- Clear, concise and readable presentation.
- Real-world solved problems included in the chapters for better understanding of managerial accounting principles and techniques.
- Inclusion of charts, diagrams and figures to help in understanding the discussion easily and quickly.

- Thought-provoking and real-life theory questions given at the end of all chapters.
- Exercises and problems given in an easy to complex manner to help the students in better learning and understanding of the material.

The book is intended primarily for M.B.A., M.Com. students and other students who are pursuing professonal programmes in Indian universities and Management Institutes. Also, the book will adequately fulfil the requirements of those studying who are studying management accounting for the first time, those who plan a management and finance career and those who are interested in learning and understanding management accounting.

I wish to express my thanks to academic colleagues and others for their helpful comments and suggestions.

I am grateful to my wife Pratibha and our children Sanjay, Seema and Rajnish for their moral support and understanding in completing this project.

Professor Jawahar Lal

CONTENTS

PART ONE: FUNDAMENTALS

PART FOUR: PLANNING AND CONTROL

PART FIVE: SPECIALISED TOPICS

Part One

FUNDAMENTALS

CHAPTER 1

Management and Cost Accounting: An Overview

CONCEPT OF MANAGEMENT ACCOUNTING

Management accounting is that field of accounting which deals with providing information including financial accounting information to managers for their use in planning, decision making, performance evaluation, control, management of costs, and cost determination for financial reporting. Managerial Accounting contains reports prepared to fulfil the needs of managements.

The National Association of Accountants (USA), in Statement No. 1 A (Statements on Management Accounting, 1982), has defined management accounting as:

"...the process of identification, management, accumulation, analysis, preparation and communication of financial information used by management to plan, evaluate, and control within the organisation and to assure appropriate use and accountability for its resources"

Thus, management accounting is concerned with data collection from internal and external sources, analysing, processing, interpreting and communicating the information for use within the organisation so that management can more effectively plan, make decisions and control operations.

MANAGEMENT PROCESS AND ROLE OF MANAGEMENT ACCOUNTING

The Management process implies the four basic functions of (1) Planning, (2) Organising (3) Controlling, and (4) Decision making. Management accounting plays a vital role in these managerial functions performed by managers.

(1) *Planning:* Planning is formulating short and long-term plans and actions to achieve a particular end. The long-term plan indicates management's expectation of the future during the next three to five years or perhaps even longer. Planning requires setting objectives and identifying methods to achieve those objectives. Planning involves such activities as setting selling prices, arranging for the financing of a plant expansion, and the development of new products. A budget

is the financial planning showing how resources are to be acquired and used over a specified time interval.

Management accounting is closely interwoven in planning both because it provides information for decision making and because the entire budgeting process is developed around accounting-related reports. Management accounting helps managers in planning by providing reports which estimate the effects of alternative actions on an enterprise's ability to achieve desired goals. For example, if a business enterprise determines a target profit for a year, it should also determine how to reach that target. For example, what products are to be sold at what prices? The management accountant develops data that helps managers identify the more profitable products. Similarly, the effects of alternative prices and selling efforts (say, what will profit be, if we cut prices by 5% and increase volume by 15%, etc.) can easily be determined by the management accountant.

(2) *Organising:* Organising is a process of establishing an organisational framework and assigning responsibility to people working in an organisation for achieving business goals and objectives. The type of organisational structure differs from one business enterprise to another. In some organisations there may be centralised structure and in others, organisational structure may be decentralised. In the organising process, departmentalisation can be done by setting up divisions, departments, sections, branches. Organising requires clarity about each manager's responsibility and lines of authority. The various departments and units are interrelated in a hierarchy, with a formal communication structure in which information and instructions are passed downwards to lower level management and upwards to top management level.

Management accounting helps managers in organising by providing reports and necessary information to regulate and adjust operations and activities in the light of changing conditions. For example, the reports under managerial accounting can be prepared on product lines on which basis managers can decide whether to add or eliminate a product line in the current product mix. Similarly management accountant can provide sales report, production report to the respective managers for taking suitable action about the sales and production position.

(3) *Controlling*: Control is the process of monitoring, measuring, evaluating and correcting actual results to ensure that a business enterprise's goals and plans are achieved. Control is accomplished with the use of feedback. Feedback is information that can be used to evaluate or correct the steps being taken to implement a plan. Feedback allow the managers to decide to let the operations and activity continue as they are, take remedial actions to put some actions back in harmony with the original plan and goals or do some rearranging and replanning at midstream.

Management accounting helps in the control function by producing performance reports and control reports which highlight variances between expected and actual performances. Such reports serve as a basis for taking necessary corrective action to control operations. The use of performance and control reports follows the principle of management by exception. In case of significant differences between budgeted and actual results, a manager will usually investigate to determine what is going wrong and possibly, which subordinates or units might need help.

(4) *Decision making:* Decision making is a process of choosing among competing alternatives. Decision making is inherent in each of three management functions described above namely, planning, organising and controlling. A manager cannot plan without making decisions and has to choose among competing objectives and methods to carry out the chosen objectives. Only one of different competing plans can be selected by a manager. Similarly in organising, managers need to decide on an organisation structure and on specific actions to be taken on day-to-day operations. In control function, managers have to decide whether variances are worth investigating.

Before knowing the role of management accountant in the decision making area, it is, first, necessary to understand the decision making process. The decision making process includes the following steps:[1]

(*i*) Identifying a problem requiring managerial action.
(*ii*) Specifying the objective or goal to be achieved (e.g., maximising return on investment).
(*iii*) Listing the possible alternative courses of action.
(*iv*) Gathering the information about the consequences of each alternative.
(*v*) Making a decision, by selecting one of the alternatives.

Management accounting plays a critical role in step 4 of the decision making process. Management accounting system contains a storehouse of valuable information for predicting the results of various courses of action. It can assist management in formally structuring decision problems as well as placing the alternatives and their consequences in a form that will be easier for management to evaluate.

FINANCIAL ACCOUNTING

Financial Accounting is concerned with providing information of 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. The following points are important to understand the scope and nature of financial accounting:

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 three primary financial statements for a profit-making entity in India, *viz.,* the Income Statement (statement of revenues, expenses and profit), the Balance Sheet (statement of assets, liabilities and owners' equity) and Cash Flow Statement.

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 techniques includes generally accepted accounting principles (GAAP).[2] 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.

---

1. Sidney Davidson *et. al., Managerial Accounting,* The Dryden Press, 1988, p. 5.
2. Generally Accepted Accounting Principles (GAPP) encompass the conventions, rules and procedures necessary to define accepted accounting practice at a particular time.

Users of Financial Accounting Information

As stated earlier, financial accounting information is intended primarily to serve external users. 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, management, tax authorities, employees, customers. Some users need financial accounting information to help those who have direct interest in a business enterprise. Example 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 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 management as it helps them to direct and control the firm activities. 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 and managerial 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 and therefore can not 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 departments. 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 expense. 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.

(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.

(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.

DIFFERENCES BETWEEN MANAGEMENT ACCOUNTING AND FINANCIAL ACCOUNTING

The accounting information system in an organisation can be divided into two important subsystems or branches: (*i*) Management Accounting and (*ii*) Financial Accounting.

Management accounting and financial accounting differ from each other in the following respects:

(1) Primary users of information: The users of financial accounting statements are mainly external to the business enterprise. These financial statements are relevant to managements but are not adequate for the purpose of planning, control and decision making. External users include shareholders, creditors, financial analysts, government authorities, stock exchange, labour unions, etc.

Management accounting aims at preparing reports and supplying information to management for planning, controlling and decision making. The nature of internal reports and data varies for different levels of management in conformity with their information requirements for analysing business operations and for planning and control purposes.

(2) Accounting method: Financial accounting follows the double-entry system for recording, classifying and summarising business transactions. This accounting process results in aggregate balances of all accounts maintained in a firm's books. Managerial accountings is not based on the double-entry system. The data under Managerial accounting may be gathered for small or large segments or activities of an organisation and monetary as well as other measures can be used for different activities in the firm.

(3) Accounting principles: The "generally accepted accounting principles" are important in financial accounting and are used extensively while recording, classifying, summarising, and reporting business transactions. The use of GAAP adds credibility and reliability to financial statements and creates confidence among the financial statement users.

On the contrary, managerial accounting is not bound to use the "generally accepted accounting principles". It can use any accounting technique or practice which generates useful information. Besides, data developed in management accounting may be facts, estimates, projections, analyses, etc.

(4) Unit of measurement: All information under financial accounting is in terms of money. That is, transactions measured in terms of money have already occurred. In comparison managerial accounting applies any measurement unit that is useful in a particular situation. Besides the monetary units, the management accountant may find it necessary to use such measures, as number of labour hours, machine hours and product units for the purpose of analysis and decision making.

(5) Time Span: Financial accounting data and statements are developed for a definite period, usually a year or a half-year or a quarter. It requires that financial statements be developed and presented at regular time intervals.

Management accounting reports and statements are prepared whenever needed. Reports may be prepared on a monthly, weekly or even daily basis. Frequency of reports is determined by particular planning, controlling and decision making needs.

(6) General Purpose Report vs. Specific Purpose Report: Financial accounting produces information and reports which are general purpose reports in order to serve the informational needs of many external users such as shareholders, creditors, potential investors, customers, suppliers, regulatory authorities, employees and the general public. Financial accounting is concerned with overall firm performance rather than individual segments or departments.

On the contrary, the reports and data developed in management accounting are known as specific purpose reports designed for a particular user (manager) or particular decision. Management accounting uses internal reports to evaluate the performance of entities, product lines, departments and managers.

(7) Historical vs. Futuristic Data: Financial accounting has a historical orientation and records and reports what has happened. Financial accounting concentrates on the results of past decisions. Management accounting has a futuristic orientation and concentrates on what is likely to happen in the future. This is due to the fact that management accounting emphasises on developing information for planning, control and decision making purposes.

COST ACCOUNTING

Cost accounting, as a tool of management, provides management with detailed records of the costs relating to products, operations or functions. Cost accounting refers to the process of determining and accumulating the cost of some particular product or activity. It also covers classification, analysis and interpretation of costs. The costs so determined and accumulated may be the estimated future costs for planning purposes, or actual (historical) costs for evaluating performance.

COST ACCOUNTANCY

Cost accounting has been differentiated from cost accountancy. The Institute of Cost and Management Accountants, London has defined cost accountancy 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. Costing 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. There are mainly two methods of costing known as job costing and process costing. The 'process' includes the day-to-day routine of determining costs within the method of costing (either job or process) adopted by a business enterprise. Within such a process, there could be historical costing, marginal costing, absorption costing, standard costing etc.

In practice, the three terms cost accounting, cost accountancy, and costing are most often used interchangeably although they are defined differently.

COST ACCOUNTING AND MANAGEMENT

Management 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 in cost accounting assists management in performing the following important tasks:

1. Cost accounting helps in determination and analysis of cost of departments, processes, jobs, products, sales territories, sales order etc. 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. Cost statements produced at regular, short intervals, which are not prepared in financial accounting, would have enabled the firm to take prompt action to overcome the problems of producing and selling Product C.

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 A 8,000 in the year; its selling and distribution costs are also particularly more compared to the other products.

The firm may decide to discontinue product C, but before deciding this, an enquiry may be made of the cost structure to find out whether or not more efficient manufacturing, selling and distribution is possible. At the same time attention must be paid to pricing policy. It should be investigated as to whether the selling price of this product can be increased to a profitable level.

Cost Statements

Particulars	*Products*				*Total*
	A	*B*	*C*	*D*	
Sales	A 60,000	A 60,000	A 40,000	A 40,000	A 2,00,000
Materials	30,000	22,000	26,000	24,000	1,02,000
Wages	12,000	8,000	12,000	8,000	40,000
Direct Exp.	2,000	2,000	3,000	1,000	8,000
Prime Cost	44,000	32,000	41,000	33,000	1,50,000
Work Exp.	1,600	2,000	500	200	
Selling Exp.	400	1,600	2,000	400	
Distribution Exp.	1,000	400	3,500	200	
General Adm. Exp.	1,000	4,000	1,000	200	
Overhead costs	4,000	8,000	7,000	1,000	20,000
Total cost	48,000	40,000	48,000	34,000	1,70,000
Profit	12,000	20,000	–(8,000)	6,000	30,000
Percentage Profit/Loss	20%	$33^1/_3$%	(–)20%	15%	15%

2. Cost accounting helps management in controlling cost which is probably the most important objective of every business firm. Cost accounting facilitates this task through accumulation and utilisation of cost data regarding different products, activities or functions. Each cost should be examined in the light of service or benefit obtained so that management can keep the cost at the lowest possible point.
3. One of the important uses (perhaps the most important) of cost information is in helping to make revenue and profitability decisions. These decisions can be divided into the following three categories:
   (*i*) Pricing — Cost data are vital in pricing new products, and to make a decision as to whether to lower or raise a price.
   (*ii*) Product mix — Management generally has to make short-term and long-term product mix decisions. For short-term cost data are used to determine which product to push in the market. Similarly, in the long run the questions of increasing and decreasing capacity can be solved with the help of relevant cost information.
   (*iii*) Profit-volume decisions — The profit is mainly the result of a combination of three factors, *viz.,* cost, volume, selling price. Decisions like reducing price and having additional sales, maintaining *status quo* and accepting a lower income, increasing quality of the product and having extra volume of sales, increasing selling price and improving the turnover, are significant.

   Cost data assists managements in making sound decisions in all these important areas.
4. Cost accounting helps in making special cost studies and investigations which are vital to management in formulating policies and plans directed towards profitable operations. Such special studies include pricing of a new product or new services, elimination of seasonal conditions, expansion or contraction programmes, replacement of machinery and equipment, dropping a product, changes in methods of distributing products, changes in production methods.
5. Cost accounting assists and participates in the formulation and execution of budgets and standards. Cost information for managerial decision making and planning is the most important justification of a sound cost accounting system.

OBJECTIVES OF COST ACCOUNTING

There is a direct relationship among information needs of management, cost accounting objectives, and techniques and tools used for analyses in cost accounting. Cost accounting has the following three important objectives:

1. To determine product costs.
2. To facilitate planning and control of regular business activities.
3. To supply information for short and long-run decisions.

Product Costing

The objective of determining the cost of products is of prime importance in cost accounting. The total product cost and cost per unit of product are important in making inventory valuation, deciding price of the product, and managerial decision making. Product costing covers the entire cycle of accumulating manufacturing and other costs and subsequently assigning them to work-in-progress and finished goods.

Planning and Control

Another important objective of cost accounting is the creation of useful cost data and information for the purposes of planning and control by management. The different alternative plans are evaluated in terms of respective cost and associated benefits.

The management control over business operations aims to establish balance between actual and budgeted performances. A properly designed cost accounting system includes the following steps in the control process:

1. Comparing actual business performances with budgets and standards.
2. Analysing the variance between budget and standards and actuals by causes, and management responsibility so that corrective action may be taken.
3. Providing managers with data and reports about their individual performances and performance of subordinates.

Information for Decisions

An important purpose of the cost accounting system is to provide data and special analyses for short and long-run decisions of a non-recurring nature. Appropriate cost information must be accumulated to make a wide variety of short and long-run decisions.

COST ACCOUNTING AND MANAGEMENT ACCOUNTING

Although over the years, the subject matter of cost accounting has broadened, it is concerned mainly with the techniques of product costing and deals with only cost and price data. It is limited to product costing procedures and related information processing. It helps management in planning and controlling costs relating to both production and distribution activities.

Management accounting may be defined as the application of accounting techniques for providing information designed to help all levels of management in planning and controlling the activities of a business enterprise and in decision making. Management accounting is not confined to the area of product costing, cost and price data. In management accounting, the objective is to have a data pool which will include any and all information that management may need. For example, if management decides to depend on long-term debt for expansion of business, it may be investigated as to what effect this decision will have upon the earnings per share? Should debt in the capital structure be too large or small? Similarly, management may be interested in knowing the adequacy of cashflow receipts to pay current obligations or the effect of inflation on business decisions and performances. Thus, management accounting helps management in the total situation.

In spite of the differing parameters of cost accounting and management accounting, cost accounting is generally indistinguishable from what is known as management or managerial accounting. Both these accounting systems are closely linked as they use common basic data and reports to a significant degree. Much of the information used to prepare accounting statements and reports in cost accounting is also used in management accounting reports. Management accounting utilises the same (and also additional) data to prepare budgets, performance reports, control reports, data analyses for decision making, planning and control purposes.

ADVANTAGES OF COST ACCOUNTING

Business enterprises can derive many advantages from the cost accounting system. Some advantages are listed below:

1. The cost accounting system provides data about profitable and unprofitable products and activities. After investigating the causes of low profitability and unprofitability, management can take suitable corrective measures which may lead to higher profit.
2. All items of costs can be analysed to minimise the losses and wastage emerging from the manufacturing process and reduce the costs associated with different activities.
3. Production/manufacturing methods may be improved or changed so that costs can be controlled and profit increased.
4. Cost data can be obtained and compared with standard cost within the firm or industry.
5. Cost accounting helps management in avoiding losses arising due to many factors, such as low demand, competitive conditions, change in technology, seasonal demand for the product and the like.
6. Cost accounting also provides cost data and information to determine the price of the product. The cost of the product is perhaps the most important determinant of product pricing.
7. Negotiations with government and labour unions can easily be made with the information provided by the cost accounting system.
8. Cost accounting helps management in knowing the costs of different alternatives and selecting the most advantageous course of action. Decisions like make or buy, continue or drop a product, buy or lease, sell or process further, operate or shut down and other short-term decisions are easily solved with the help of cost accounting data.
9. More accurate and reliable financial accounts can be prepared promptly for use of management.
10. An adequate cost accounting system ensures maximum utilisation of physical and human resources, checks fraud and manipulations, and helps employees as well as the employer in their basic goals of getting higher earnings and maximising the profit of the concern.

METHODS OF COSTING

As stated earlier, the term "costing" refers to the techniques and processes of determining costs of a product manufactured or a service rendered. Different methods are applied in business enterprises to ascertain costs depending upon the nature of the product, production method and specific business conditions. For example, in a textile or steel company, raw material passes through different stages (processes) and production is done continuously. In some other industries, production is done at different customers' specific orders and each job is obviously different from the other job. In service industries like transport, hospital, banks etc., all activities and costs incurred relate mainly to performing certain services (or activities). There are two methods of costing:

(A) Job Costing

(B) Process Costing

All other methods of costing are only variants of the above two methods of costing. All possible variations of job and process costing are as follows:

(A) Job Costing

(*i*) Batch Costing

(*ii*) Contract or Terminal Costing

(*iii*) Multiple or Composite Costing

(B) Process Costing

(*i*) Unit or Single Output Costing

(*ii*) Operating (Service) Costing

(*iii*) Operation Costing

Job Costing

Job costing is used in those business concerns where production is carried out as per specific order and customers' specifications. Each job (or product) is separate and distinct from the other jobs or products. The method is popular in enterprises engaged in house-building, ship-building, machinery production and repair. Job costing has the following variants:

(i) Batch Costing

Batch costing is based on the concept of contract costing. This method is used to determine the cost of a group of identical or similar products. The batch consisting of similar products is the unit and not the single item within the batch. This method can be usefully applied for the production of nuts and bolts, medicines, components and other items which are manufactured in distinct batches.

(ii) Contract or Terminal Costing

This method of costing, based on the principle of job costing, is used by house builders and civil contractors. The contract becomes the cost unit for which relevant costs are accumulated.

(iii) Multiple or Composite Costing

This costing method is used in those industries where the nature of the product is complex, such as motor cars, aeroplanes, etc. In such cases costs are accumulated for different components making the final product and then totalled to ascertain the total cost of the product.

Process Costing

This costing method is used in those industries where production is done continuously, such as chemicals, oil, gas, paper, etc. It is difficult to trace the costs to specific units and the total cost is averaged for the number of units manufactured. Sometimes, total cost and per unit cost is calculated at each stage of production for control purposes. Process costing has the following variants:

(i) Unit or Single Output Costing

This method is used where a single item is produced and the final production is composed of homogeneous units. The per unit cost is obtained by dividing the total cost by the total number of units manufactured.

(ii) Operating (Service) Costing

Operating costing method is used by those organisations which render services and do not manufacture any physical item, such as transport, power house, hospital. The cost units differ among these service organisations depending upon the nature of service being rendered. But usually the units are passenger-mile, tonne-mile, a bed in hospital, per student in a college.

(iii) Operation Costing

This costing method aims at ascertaining the costs of each operation in place of each process. In this method the assumption is that output is achieved through a number of different operations.

Besides the above variants of job costing and process costing, the different techniques or types of costing (discussed below) can be found in these two methods of costing and can be used to determine costs therein.

TECHNIQUES (TYPES) OF COSTING

The terms 'techniques' or 'types' refer to the manner of ascertaining costs of a product, job or activity. But these terms (techniques or types) also necessarily indicate what types of costs are being ascertained such as historical cost, standard cost, absorption (full) cost, marginal cost etc. It is clear that the term 'Methods of Costing' itself signifies only the method(s), job costing or process costing, that is being used to determine costs without indicating the types of costs (historical, standard, full or marginal) which are ascertained under the two methods of costing (Job or Process Costing), The following are generally the techniques of costing.

(1) Historical Costing

Historical costing is a system of costing under which costs are determined after they have been incurred.

(2) Standard Costing

Under standard costing, standard costs are determined and used, and then compared with the actual costs to determine the extent of variances so that remedial action can be taken. Standard costs are the predetermined costs in conformity with the most efficient operation and use of the resources within the film.

(3) Absorption or Full Costing

Under this costing method, all manufacturing costs, fixed and variable, are charged to products, jobs, processes, etc., and are included in cost of goods sold and for valuation of inventory.

(4) Variable or Marginal Costing

Variable costing method charges only variable production costs to products or jobs, and thus the cost of the products or jobs consists of only variable production and not fixed production costs. The fixed production, administration, selling and distribution costs are written off against profits in the periods in which they arise.

(5) Uniform Costing

Truly speaking, uniform costing is not a technique of costing, but is an attempt by several undertakings and organisations to use similar costing principles and/or practices.

COSTING SYSTEM

The term 'costing system' refers to an accounting system followed to accumulate costs, to ascertain costs of products or jobs, to prepare cost information using some procedures and principles for recording of cost data. Since there are two basic methods of costing — Job Costing and Process Costing, to ascertain costs, the costing system followed by business enterprises are also divided into two categories:

1. Job Order Costing System
2. Process Costing System

It should be understood that within these two costing systems, further, business enterprises may follow different techniques of costing such as historical cost, standard cost, full cost, marginal cost etc., which have been discussed earlier.

INSTALLATION OF A COST ACCOUNTING SYSTEM

A cost accounting system is a system that accumulates costs, assigns them to cost objects, i.e., products, jobs, processes, etc., and reports cost information. In addition to this, a proper cost accounting system assists management in the planning and control of business operations, in analysing product profitability, and in accomplishing business objectives through optimum utilisation of available resources. The underlying principles, procedures and objects of all costing system are the same, but the application of these principles and methods may vary with the circumstances.

The installation of costing system in organisations is not an easy task. There are many difficulties, as listed below, which are faced by organisations while setting up costing system.

(1) Opposition from the Existing Staff

The existing staff is likely to oppose the introduction of costing system, may dislike the additional work and may not provide cooperation which is necessary for the success of cost accounting system.

(2) Shortage of Trained Manpower

Installation of cost accounting system requires trained staff to operate the system effectively which organisations may not have, thus affecting adversely the better application of the system.

(3) Error in Measuring Requirements

The organisations, big and small, have varying requirements as to the costing system. Organisations may not know their specific requirements accurately. Consequently, the installation of costing system will either not meet their requirements or will provide unnecessary sophistication and dose of accounting procedures.

(4) Non-cooperation from Management

Resistance is noticed not only from the lower and middle staff but also from the members of top management. Managers may not support the Managing Director in his efforts to minimise costs and control activities as these might be looked upon as an interference in their managerial authorities.

ARGUMENTS AGAINST COST ACCOUNTING

Cost accounting undoubtedly helps managements in managing the affairs of business efficiently and in accomplishing business goals. However, some organisations do not look with favour the installation of cost accounting system. Some arguments which are advanced against adopting cost accounting are as follows:

1. The system of cost accounting may prove costly and small organisations may not find it profitable. The collection, analysis, allocation and maintenance of cost data is time-consuming and difficult task which requires efficient manpower.
2. All business organisations are required to prepare financial accounts to determine profit and financial position. Installation of cost accounting system along with financial accounting system increases work load.
3. Cost accounting system itself is not an end but only a means to achieve certain objectives. The system itself will not improve efficiency, control costs and avoid wastage. Sometimes management personnel become inactive with the mere installation of the cost accounting system.

However, all the above arguments are not valid. Keeping in view the advantages and contributions of cost accounting to management, as explained earlier, it can be rightly said that cost accounting is a necessity for all business organisations. For manufacturing firms, cost accounting is vital necessity to reduce cost, to avoid waste, to improve efficiency and to provide cost data to management for planning, control and decision making.

COST CENTRES

The Institute of Cost and Management Accountants, London defines cost centres as "a location, person, or item of equipment (or a group of these) for which costs may be ascertained and used for the purposes of cost control." A cost centre is an organisational segment or area of activity considered to accumulate costs. The following are the types of cost centres usually found in a manufacturing company.

Impersonal Cost Centre

A cost centre which consists of a location or item of equipment (or a group of these).

Personal Cost Centre

A cost centre which consists of a person or group of persons.

Operation Cost Centre

A cost centre which consists of machines and/or persons carrying out similar operations.

Process Cost Centre

A cost centre which consists of a specific process or a continuous sequence of operations.

COST UNITS

The Institute of Cost and Management Accountants, London has defined a cost unit as follows: "A unit of quantity of product, service or time (or a combination of these), in relation to which cost may be ascertained or expressed."

In the job costing method, cost unit is a single specific order; in batch costing it consists of a group of similar articles; and in contract costing, it consists of a single product (contract). The cost units used in different industries cannot be uniform. The cost units and centres should be those which suit the business and which are readily understood and accepted by all concerned.

The following Table gives examples of cost units (i.e., unit of cost activity) and method of costing used in different industries.

Cost Unit and Method of Costing

Industry/Enterprise	*Cost Unit*	*Method of Costing*
1. Building	House or square foot of area	Job Costing
2. Chemical	Tonne, pound or kilogram	Process Costing
3. Cement	Tonne	Process Costing
4. Automobile	Number	Process Costing
5. Steel	Tonne	Process Costing
6. Transport	Tonne kilometre, Passenger kilometre	Operating Costing
7. Cable	Metre	Process Costing
8. Gas	Cubic foot or cubic metre	Process Costing
9. Nuts and bolts	Gross or some measure of standard weight	Job Costing

10. Power	Kilowatt hour	Process Costing
11. Paper	Ream	Process Costing
12. Timber	Cubic foot	Process Costing
13. Brewery	Per dozen bottles or per gallon of draught brew	Process Costing
14. Biscuits	Per (WT)	Process Costing
15. Hospital	Per bed occupied/out-patient visit	Operating Costing
16. Case-making	Per case	Job Costing
17. Road Contractor	Per mile	Job Costing
18. Ice cream	Per gallon	Process Costing
19. Knitted textiles	Per pound/kg of fabric	Process Costing
20. Canned fruit	Per dozen cans or per gross cans	Process Costing
21. Soft drinks	Cases of 24 bottles each	Process Costing
22. Oil extraction, petrochemicals	Gallons, litres, tonnes	Process Costing
23. Pharmaceuticals	1000 nos. tablets, ampoules	Process Costing
24. Machine building	Numbers	Job Costing
25. Readymade garments	Numbers	Batch Costing
26. Aircraft	Numbers	Job Costing
27. Sugar	Tonnes, kilograms	Process Costing
28. Furnishings	Each article by numbers	Job Costing
29. Confectionary	Per kg	Process Costing
30. Clothing (automatic process)	Per dozen articles	Process Costing
31. Bicycle manufacturing	Number	Multiple Costing
32. Textiles	Metres, yards	Process Costing
33. Flour	Tonnes	Process Costing
34. Parts manufacturing	Nos. of articles in tens, hundreds, thousands	Job Costing

THEORY QUESTIONS

1. What is management accounting? Discuss the role of management accounting in the areas of planning, control and decision making.
2. How do management accounting and financial accounting differ?
3. What are the steps involved in the managerial decision making process? What role does management accounting play in that process.
4. "The best management accounting system is one that provides managers with all the information they would like to have." Do you agree with this statement? Give reasons.
5. Why is financial accounting subject to more strict rules and regulations than management accounting?
6. What are the four basic functions of the management process? How does management accounting help in this process?
7. "Management accounting is an extension of financial accounting techniques for special uses." Explain this statement with suitable illustrations?
8. "The emphasis of financial accounting and management accounting differ." Explain.
9. Management accounting is an extension of financial accounting." Critically examine this statement and bring out the difference between management accounting and financial accounting?
10. "Management accounting is nothing else but financial and cost accounting tailored to the requirements of management." Defend or criticise the statement. Give reasons.
11. Explain the difference between financial accounting and management accounting. What is the role of a management accounting in a business firm.

12. Explain the nature and scope of management accounting. In what ways do the roles and responsibilities of management accountants differ from those of financial accountants?
13. For each item below, explain how you think management accounting and financial accounting may be the same and/or may differ.
    (*a*) The frequency with which reports are prepared.
    (*b*) The timeliness of the information to the user when he or she receives a report.
    (*c*) The degree of emphasis on precision and accuracy.
    (*d*) The necessity of being audited.
14. What is cost accounting? What are its objectives? How do cost accounting records help in the planning and control of operations of a business enterprise?
15. What is meant by cost accounting? In what essential respects does cost accounting differ from financial accounting? How does cost accounting contribute to the effective and efficient management of an industrial establishment?
16. A cost keeping system that simply records costs for the purpose of fixing sale prices has accomplished only a small part of its mission." What are other functions of costing?
17. "Cost accounting is an unnecessary luxury for business establishments." Do you agree with the statement? Discuss.
18. Explain the important objectives of cost accounting.
19. What is cost accounting? Discuss briefly its important functions in a business firm.
20. "Cost accounting has come to be an essential tool of the management." Comment.
21. "Cost accounting is a system of foresight and not a postmortem examination, it turns losses into profits, speeds up activities and eliminates waste." Discuss.
22. What is a cost centre and how does it differ from a department of a factory?
23. How far is cost information helpful for the following purposes:
    (*a*) Fixation of selling prices
    (*b*) Control of costs
    (*c*) Management decisions.

❒ ❒ ❒