Costing for the Service Industry

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By

Veda D. Malagatti

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PREFACE

Costing for the Service Industry was written to help students understand the methodology of costing and its applications. To achieve this goal, students must also develop professional competencies such as strategic/critical thinking, risk analysis, decision making, and ethical reasoning. Most textbooks illustrate the methodology and explain it with ample examples, but in this book, research-based examples with different approaches have been used, like the traditional method in education, ABC (Activity-Based Costing) in the agricultural sector and service costing in transport. As for professional competencies, one should be competent enough to apply these methods in real-life situations. This book tries to bridge the gap between the applications learnt and the implication that they would give appropriate results uniformly everywhere in the world. Many of us fail to recognize that cost accounting information would minimize uncertainties and biases. The failure to use it correctly places undue reliance on computational results and inhibits the ability to evaluate the assumptions, limitations, behavioral implications, and qualitative factors that influence decisions. One of the goals is to learn to increase accounting expertise and focus on qualitative factors to control the influence of assimilation of information; decisions based on such information affects the accuracy of the estimation of cost.

The application of different methods of costing in various service sectors dilutes the practice of assumptions, which has a direct impact on making accurate decisions. In some cases, it can hamper the quality of the decision made. Therefore, it essentially consists of analyzing estimations of cost and devising ways to reduce it as far as possible. This requires evaluating productivity and effectiveness as this will indirectly assist in planning, monitoring and controlling the cost and then ultimately fixing the price of the product/service. Costing and cost accounting aids this objective. Costing measures and cost accounting report on the cost performance of different activities of an organization. Cost management, in turn, describes the approaches and activities in the short and long term for planning and control decisions. The resultant decisions would increase the value and decrease the costs. Cost management is an integral part of an organization's strategy to achieve competency at controlling unavoidable costs. The methodology of costing assists enterprises to grow in a competitive world. One of the most

important objectives of business is to provide a financial management information system as it plays a crucial role in strategizing the appropriate policy for risk mitigation and thus withstand competition.

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CHAPTER ONE

BRIEF EVOLUTION & IMPORTANCE OF COSTING

Costing

The ICMA (Institute of Cost and Management Accountants) in London defines costing as "the technique and process of ascertaining the costs". Costing is the primary function of ascertaining the cost of products and services by following well-established techniques and procedures. Costing as a technique is a body of principles and rules that govern the procedure of ascertaining costs. As Dobson maintained, the technique of costing is never static, nor are its rules fixed for all time. These principles and rules can be modified and improved in light of developments in the business environment and organizations in which costing is being carried out. There are various techniques of costing, like full or absorption costing, historical costing, marginal costing, standard costing, etc. As a process, costing denotes the procedure of ascertaining the costs, which includes identification, allocation, apportionment, and the absorption of costs to cost units.

According to W. M. Harpur, "A cost is the value of economic resource used as a result of producing or doing the thing for cost. Cost is the price to be paid for its value".

Cost Accounting

Kohler defines cost accounting as "that branch of accounting dealing with the classification, recording, allocation, summarization and reporting of current and prospective costs".

Wheldon defines cost accounting as "the classifying, recording and appropriate allocation of expenditure for the determination of costs of products or services, the relation of these costs to sales values, and the ascertainment of profitability".

Shilling law defines cost accounting as "the body of concepts, methods and procedures used to measure, analyze, or estimates costs, profitability,

and the performance of individual products, departments and other segments of a company's operations, for either internal or external use or both, and to report on these questions to the interested parties".

Thus, cost accounting is broader in scope than costing and aims at two more functions, namely the:

(a) Application of cost control methods, and
(b) Ascertainment of the profitability of products, activities, functions, etc.

Cost accounting includes cost classification, cost recording, cost collection, cost determination, and cost reporting.

Cost Accountancy

The ICMA 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 the ascertainment of profitability. It includes the presentation of information derived therefrom for the purpose of managerial decision making". Thus, cost accountancy is a comprehensive term that includes costing and cost accounting and aims at cost ascertainment, cost control and ascertainment profitability. It also aims at serving the managers in an organization at different levels in their decision-making process by furnishing relevant cost information obtained from cost accounting.

Evolution of Cost Accounting and Growth of Cost Accounting in India

The history of cost accounting can be traced back to the 14th century. In the first stage, cost accounting was concerned only with three prime cost elements: direct material cost, direct labour cost and direct expenses. Later, a distinction between manufacturing and non-manufacturing costs was made by Mr. Norton. Thus, material costs, labour costs, and manufacturing costs constitute the prime costs. Around the time of the 19th century, the importance of non-manufacturing costs (overheads) was recognized as one of the distinct elements of cost. The techniques of estimations and standards were included in cost accounting. Instead of using actual cost, standard costs are used and compared with the actual cost. Cost accounting methods are applied in all types of organizations and enterprises. In modern times, the development of electronic data

processing and information technology plays a significant role in the use and growth of the cost accounting system as well as cost accounting as part of the management information system. Due to the certain limitations of cost accounting, management accounting was also used. Both are internal to the organization and are used as common tools and techniques. In spite of their similarities, there are certain differences between the two. Management accounting is derived from both cost accounting and financial accounting. It deals with the effects and impacts of the costs on business and helps the managers in various ways, not only from the cost point of view but also from different angles so they can make better decisions.

The application of cost accounting methods in industry was evident at the beginning of the 20th century. The following factors have accelerated the system of cost accounting in India:

1) Increased awareness of cost-consciousness by the Indian industrialists.
2) Growing competition among manufacturers.
3) Changing government policies relating to the economy, accounting, and taxation.
4) Increased government control over pricing led to manufacturers giving the utmost importance to the installation of cost accounting.
5) Increased consumer awareness of process costs, the quality and cost of goods and services, brand performance, and the image of the organization.
6) The establishment of various regulatory authorities to regulate the functioning of private and public enterprises, and also government agencies across the sectors and their activities, has led to the adoption of suitable costing and cost accounting policies, and practices in their systems to fulfill the interests of the stakeholders and the government.
7) Increased competition in the market and enhanced awareness on the part of consumers, employees, investors, suppliers etc. have compelled the Indian enterprises to adopt suitable costing and cost accounting practices.
8) The importance of cost accounting and cost audits was recognized in all kinds of organizations after the economic reforms launched in 1991. Cost audits were made compulsory in 45 public enterprises, and there is a move to make it compulsory in other public and private enterprises in the years to come.

9) The provision of a cost audit under section 233B of the Companies Act has given impetus to the development of cost accounting in India. The Vivan Bose Enquiry Commission brought to light various malpractices prevalent in manufacturing establishments, and it was thought that the financial audit at the end of the year was insufficient to judge the real efficiency of manufacturing organizations. As a result, the concept of a cost audit emerged in order to understand how to best utilize the resources of the manufacturing organizations.

Requisites of a Cost Accounting System

The following are the essential requirements of an ideal cost accounting system for organizations:

1) Accuracy
2) Simplicity
3) Elasticity
4) Economy
5) Comparability
6) Promptness
7) Periodical preparation of accounts
8) Reconciliation with financial accounting
9) Uniformity
10) Equity

Benefits of a Cost Accounting System

❖ **Effective access to account books as per cost accounting norms**

In today's world, an education institution is no less complex than a fledging corporate house. Therefore, it goes without saying that the recording and maintaining of costs should be done as per cost accounting norms, one of the best concepts in modern management practices and state-of-the-art technology for managing internal and external operations. It encompasses and integrates all pillars of an institute's activities – academic, administrative, and financial.

❖ **Effective MIS records for different users**

In these days of information overdrive, it is critical to possess an efficient management information system that facilitates cost information,

cost access, cost accessibility, and responsive and effective decisions regarding cost control, reduction, management in terms of its objectives, and brand image enhancement. This is why most progressive corporations spend heavily on their MIS. It further facilitates the automation of all key processes of an institute, which forms the backbone of a comprehensive MIS. It is accessed through the internet, which enables a wider and convenient usage of information for all types of stakeholders.

❖ **Effective usage by different stakeholders**

It addresses the information and data processing needs of all the partners of the institute. The data warehouse is the House of Information to be used to resolve any problems that arise. Dealing with problems at the initial stage is crucial for sustainability.

❖ **Effective planning during budgeting: Aids in the planning process**

Planning the provisional targets that result from exogenous data about future trends and movements according to future needs, the trend of demand for any courses, special projects, and the estimation of income and expenses based on the previous year's statements all come under budgeting. The targets also relate to quantitative and qualitative trends, such as the challenges to be met in the technical coefficients or the percentage of such statistical measurements as well as the relatively precise judgments on which priorities to act on, the cost estimations, sources of finance to make clear what the proportion of expenditure should be, the subject of policy options, etc. It is also necessary to evaluate the summation of price trends for the production of individual price trends for better forecasting.

❖ **Effective budgetary control quantitative targets and qualitative targets**

Capital costs vary considerably according to the type of establishment, size, category, etc. This includes all capital investment, i.e. buildings, the repairs and maintenance of such buildings, land, and expenditures further related as per region and size of establishments, which also includes the technical aids and equipment used to derive the average cost of capital and equipment per unit. An increase in the proportion of quantity, the expansion of networks or a reduction in the average ratio creates variations in the operating expenditure, which would definitely influence the average level of recurrent unit cost. These contribute to performance in quantitative

terms. The value of intellectual property or the brand name resembles the qualitative terms for which forecasting is also needed.

❖ **Perform activity analysis**

Performance should be evaluated in terms of financial and non-financial returns. Financial parameters measure productivity, efficiency and effectiveness, and non-financial parameters measure quality.

The Requisition of Costing

1) Estimation of costs

This is one of the prime objectives of costing. Costs can be classified as resources sacrificed or foregone to achieve a specific objective. The cost is the price paid for a value. Costs can be bifurcated into:

- ❖ Direct and fixed
- ❖ Direct and variable
- ❖ Indirect and fixed
- ❖ Indirect and variable

All direct costs are prime costs. All indirect costs – fixed and variable – are overheads. A combination of various classifications of expenditure is crucial during the estimation of costs. Different methods of costing also help us to know whether the apportionment of overheads is exact. Allocation means "the allotment of whole items of costs to cost centers or cost units." Apportionment means "the allotment in proportions of items to cost centers or cost units." Job and process analyses involve allocating the normal cost to a particular job and the process of performing that job. The time factor also plays a crucial role as it has a direct impact on returns. The shorter the time, the greater the influence of seasonal patterns on the level of costs.

Let's take the example of lost luggage at the airport. It represents a highly unsatisfactory performance. It also costs money. Variations – time, waste, and errors – abound in the baggage handling process: misrouting the baggage, reporting the problem, processing the report, searching, retrieving, and finally delivering the lost luggage. When you translate the 6% probability gap of missing luggage into monetary terms, the hard cost of this defect can be much higher than 6% of the overall cost of handling luggage. If the baggage routing process were improved, the margin for error would be reduced and the allocation of resources, both human and

monetary, could be used much more profitably. This error cost can be calculated only when we know our actual cost.

Henceforth, the estimation of the cost of any product and service is essential. One method, ABC (activity-based costing) analysis, captures the organizational costs for the factors of production and overheads and applies them to each activity in a well-defined activity structure. The ABC approach involves assigning and attaching overheads to different products and services. It is based on the assumption that cost objects cause particular activities to be carried out which, in turn, incur costs. It is necessary to identify all the cost objects the approach produces and arrange these in a classification scheme called taxonomy. The overheads are allocated according to taxonomy and apportioned to that particular cost object. This helps rectify the error allocation, apportionment, or any biased assignment of overhead to a particular taxonomy. Only after an accurate estimate of cost can we analyze our capacity, efficiency, and standards.

2) Costing helps us to know the cost-effectiveness

Cost-effectiveness is the mandate of today. Various methodologies are being rethought because of the significant cost of programs. A detailed cost analysis needs to be carried out to determine how efficient the unit-based process method in terms of cost is in comparison with the previous method. The contribution of marginal costs represents the amount of revenues minus the variable costs that contribute to recovering the fixed costs. Once fixed costs are fully recovered, they contribute to operating incomes. A break-even analysis is that quantity of output where total revenues equal total cost – that is, where the operating income is zero. These analyses assist managers to understand the behaviour of cost. Studying their changing patterns, i.e. fluctuations due to a covariance relationship in correlation or regression, etc., with the market returns is crucial. All these macro and microeconomics, which affect the behaviour of cost, are considered in relation to the estimation of cost. Henceforth, we can strategize various alternatives after calculating cost for each and every concept. The strategy here could be between

- The cost of recruiting a less qualified teacher/lecturer and training them further, and
- The cost of recruiting a well-qualified teacher/lecturer and paying them more.

These factors have an effect on the pricing decisions, i.e. the price-fixing policy. For example, Dell sells high-quality computers at competitive

prices. To achieve its profit goals, Dell sets aggressive target costs. The company reduces its costs by making innovative design choices before costs get locked in and by improving its manufacturing and delivery processes.

Similarly, providing high-quality education at a competitive price is essential. Enriching innovation along with ERP technological aspects have an impact on fixing the price of education. Reducing the fixed cost by increasing operating revenues is the main criteria for pricing decisions. The evolution is to provide optimum quality education to users on a large scale for the least cost.

According to UNESCO, the unit cost of education needs to be reduced in order to facilitate the expansion of education in the context of the given financial and human resources. Two main items dominate the determination of the unit cost of education – the salaries of teachers and the teacher/pupil ratio. These monetary and non-monetary factors have an effect on the institution, which has a major influence on the contribution level, and this, in turn, influences pricing decisions.

3) Improving internal efficiency

The capacity and capabilities of internal operating inefficiencies are inadequate to meet the growing demands made by educated youths and managers in various disciplines. The pace of expansion is slow and the quality, by and large, uneven across the spectrum. Severe capacity constraints have emerged where demand has increased, but the allocation of public resources is niggardly; the spread of education has been inadequate and iniquitous. It is imperative to bridge the supply-demand gap in high-quality education to retain a competitive edge in the world market. Hence, costing suggests some measures to enhance quality indirectly, and also addresses equity concerns to enhance intrinsic values. It also plays a significant role in facilitating economic development and bringing about social change.

To enhance internal efficiency, scarce resources must be utilized to their optimum. The resources must be effectively and efficiently allocated. This demonstrates that by using costing, reasonable pricing, cost of production, low-maintenance construction technology, considerable savings can be made. Capital costs can also be affected by reducing unnecessary and excess costs, whether fixed or variable, when they are not socially or pedagogically essential.

One example of this is the central government's recent announcement that because of the widespread droughts and famine in India, it cut down

on government expenditure by forgoing stays in five-star hotels for days and avoiding unnecessary trips in jet planes and helicopters, etc.

Such strategies are heuristic to decreasing costs. These strategies affect the curvature of costing by controlling costs, reducing and segregating unnecessary costs, and finally eliminating unproductive costs. When we know our institution's capacity for earning income eases over different constraints, it helps us plan for future modifications, innovations, acquisitions, mergers, or partnerships. By assessing our strengths, we can get loans for our acquisitions. Businesses can strategize by increasing their numbers, which reduces the internal micro cost per unit, and which further enhances the internal efficiency of the organization.

4) Decision making

The decision-making process focuses on specific decisions, such as accepting or rejecting a one-time-only special offer, sourcing and outsourcing products or services, and replacing or keeping/continuing education courses. We especially stress the importance of distinguishing between relevant and irrelevant items when making these decisions. A decision model is a formal method for making a choice, frequently involving both quantitative and qualitative analyses. Quantitative factors, like income through sales, cost of training, entry into new markets, etc., are measurable in numerical and financial terms. Qualitative factors, like teaching and the quantum of knowledge learned by each and every student, are intangible and not measurable in numerical and financial terms.

The five-step decision process is: (a) obtain information, (b) make predictions, (c) choose alternative courses of action, (d) implement decisions, and (e) evaluate performance.

Decisions should be made on the expected future revenues or costs, and this must differ among alternative courses of action. In choosing among multiple alternatives when resource capacity is constrained, managers should focus on the scheme that yields the highest contribution margin per unit of the constraining or limiting factor. The decision is based on the financial benefits to an organization. The critical examination of the pros and cons of cost benefits and cost-effectiveness analysis is presented by a suggested framework for decision making. The current cost structure provides an opportunity to appreciate how cost is distributed. However, it is critical to understand that functional and organizational ineffectiveness, inefficiency, incompetence, and mismanagement have a direct negative impact on the bottom line.

The need of the hour is to make some crucial management decisions to determine the corporate level of tolerance for accepting and implementing change. Similarly, the following questions must be answered:

- What should the cost of the activities, cost objects, and services be?
- What kind of investment can be made in new technologies and training?
- Should the focus be on enhancing the capabilities to handle additional work and generate more revenue or do more with less by reducing the workforce?

The answers to these questions will help to set the guidelines for reducing the overall costs of the services by optimizing the performance of the information, technology and human resources.

5) Pricing Decisions

The three major influences on pricing decisions are customers, competitors and cost. The short-term and long-term targets have an impact on the pricing decisions. The time value is a new innovation in pricing decisions.

The whole world is involved in conglomerates. In manufacturing, tangible products are utilized, such as material, labour, machines, etc. In the service sector, there is the involvement of service, which is usually intangible; it can't be measured exactly, but it can be approximated. All of these can be defined as resources, which are the means for financing the business, and the result is achieved after using them.

Human resources also need to be measured; the rate of utilization and, even today, the birth rate are also considered when evaluating the rate of optimum utilization.

Organizations can be classified into two main categories: a profit or a non-profit-earning organization. The dominant purpose of the organization in the former category is to earn a profit whereas organizations in the latter category have other prime objectives, such as governing, providing a social service, and being a means of earning a living wage and development in service. Yet both types of organizations, in order to be financed and to operate reliably, need to format their resources. As such:

- Each business process should be reviewed and analysed to explore the potential for improvement,
- A vertical analysis must be conducted to minimize the number of steps/tasks by deleting and combining them,

- A horizontal analysis must be conducted to remove the information bottlenecks by introducing the right technologies, and
- Each business process must be analysed to determine the skill requirements, and recommendations must be made to provide training to bridge any gaps.

These steps will help establish the business rationale for change, and at the same time, enable refinement of the current model. A blueprint should be developed to highlight the sequence of changes and the implementation of these changes in a systematic fashion should ensure that the expected milestones are met.

The emphasis is also on opportunity cost if it arises when there are multiple uses for resources and some alternatives are not selected. Opportunity cost is included in decision making because it represents the best way an organization could have used its resources if it had not made the decisions it did.

For example, various choices for calculating opportunity cost may be the:

(1) Introduction of educational television, i.e. on a video display in classrooms and its effect on the cost of education. The cost of video screen equipment and its installation, the future cost of repairs, maintenance costs, cost of carrying inventory, etc., should be considered.
(2) Upgrading of less qualified lecturers and the effect on cost. The remuneration to less qualified lecturers is usually lower, but the cost of training sessions, the cost of hiring venues for such sessions, etc., should be considered.
(3) The cost of upgrading well-qualified lecturers. Remuneration to such lecturers may be high but the upgrading costs may be lower, and this must be analysed in relation to the overall cost.

The calculation of various opportunity costs and capacity constraints (limiting factors) have a supplementary role in decision making. The cost analysis of increasing the number of students or adding a new course/curriculum/syllabus may be the cynosure in decision making. As the number of students increases, the cost of service to them decreases as per the experience curve.

6) Improving access to finance

It is essential to reduce dismal and erratic performance, which largely reflects inertia between the centre and the state. In India, education is the shared responsibility of state/local universities and the central government. In practice, state governments are the main actors. Good organization can overcome the syndrome of central official neglect with impressive results. This study of direct and indirect costs will help to evaluate the contributory and non-contributory costs, where we can control these costs as per our requisites, reduce them if not needed, or eliminate them if found to be a waste.

It is important to reduce the role of government publicly but indirectly help it to improve its efficiency in its core function. The latter requires administrative and procedural reforms to enhance internal efficiency, autonomous financing capabilities, etc. By using marginal and ABC costings, unnecessary red tape, which inhibits efficient operation and productivity, can be eliminated. An analysis of indirect costs/variables will help to expedite further reductions in infrastructure bottlenecks and upgrade effective service by aphorizing functions, funds and functionaries.

7) Reduce cost – return disparity

A study reveals that society spends twice as much to educate a student of engineering. Only one-fifth of the cost is borne by the student; the remainder is liberally subsidized by the government. There is a need for a corrective formulation to reduce the cost-price disparity. Such subsidized money can be further optimally utilized for additional or other schemes of vocational curriculum or training. The process of Kaizen (continuous improvement) is necessary for Cost-Benefit analysis.

8) Development of pathways for growth

We can outline a path for growth after an approximate analysis of cost. We can re-strategize for diversification for further restructuring. As intensification becomes entrenched, the number of students will increase, the costs will lessen and hence investment into diversification to withstand competitiveness can be made. Self-adherence for fostering is crucial. Enhancing knowledge is the key to creating a dynamic and competitive global environment, so it should be made available at a reasonable cost.

9) Affordability

After estimating and evaluating costs, we can analyze our strength to survive in this competitive world. The evaluation of costs with respect to income will give us our surplus, if any. When I know my income and

strengths, I can take advantage of various opportunities by availing myself of funds from outside sources at reasonable interest rates.

10) Decentralizing in funding

Rather than depending on grants issued by the central government, the "synapses" in governance should be strengthened and resources used to the optimum, slowly leveraging productivity and profitability. These measures not only reduce the burden on central resources but also create a greater sense of responsibility from within as children are not dependent on their parents forever; there is still an affectionate bond, however, and they can discuss at length during the decision-making process. Similarly, we can decentralize ourselves while performing and centralize during the decision- making process.

So, we can put constraints on non-contributable surpluses and unnecessary expenditures while stressing our savings and earnings through other modes like consultancy in a committee, vocational returns, etc.

Costing helps to uncover waste, control it, reduce it, and finally eliminate it. These cost factors help planning in accordance with micro and macro analyses.

All of this data comprises information about human resources which can be used for planning, managing, performing, and organizing. This information acts as inputs for organizers controlling the financial aspects of any enterprise.

The Objectives of Costing

1) Better identification of resources

Costing exercises focus mainly on the cost of achieving intermediate indicators rather than the final outcome targets. Costing highlights the most expensive and non-contributing factor that we can eliminate if necessary. It figures out ways of performing work more effectively and efficiently without sacrificing methods.

2) Economies of scale

As per the concept of the experience curve, as the number of units increases, the cost of production decreases per unit. Similarly, we can provide education to more people at a lower cost if the intake of students increases and the costs can be diversified on various components of performance, i.e. the job process. The bottlenecks in the process or unnecessary cumulations can be recognized and dealt with.

3) Better course and programme mix

When we know the true costs of different activities in different courses, then we can consider various alternatives. This will help manipulate the scarcer resources in a much more meaningful way. Various strategies of mixing courses would enable the calculation of accurate and relevant costs and thus the determination of which courses and programs to keep, which to promote and which to cancel.

4) Better cost control system

Identifying the costs of different course activities helps determine the value-adding and non-value-adding ones. The non-value-adding ones can be modified or innovated by the induction of new, in-demand courses. Good cost systems do not have to be elaborate to be useful and should try to minimize the total cost while maintaining relevancy and cost effectiveness.

In manufacturing industries, costing results in a better understanding of costs, simplifies products and procedures, eliminates waste, cuts costs, reduces lead times, improves quality-added value, and increases customer satisfaction. The same strategies can be implemented in the service industry.

5) Better trading and networking

Cost management helps us to effectively and efficiently deliver the services and fulfill the goals of the education system. Costing leads to the resources being used meticulously and the system flourishing. The study of Cost-Benefit analysis is essential for strategies of expansion and diversification.

6) Self-efficiency and relevancy

The funding legislators and granting institutions pressure the dependent units to find ways to cut costs without reducing the quality and number of beneficiaries. Better trade-offs between the cost measurements can be worked out with the help of costing techniques and management. Making broad cuts, which is the most common approach, fails to consider the various studies of the education system. Self-financing pressures organizations to seek out activities and strategies to maintain the wasteful usage of resources which has led to unproductive results. In addition, it also looks for different sources of earnings through research, projects, consultancies, etc.

7) Reporting

Reporting of achievements, outcomes and bottlenecks as per the standards should be emphasized. Reports, if shared, can attract useful suggestions and opinions from specialists and those with expertise.

8) Benchmarking purposes

Comparisons of accounts with prestigious universities and institutions would help to bridge the gap and develop our versatility. One is able to analyse the weakness and make an attempt to improve it.

9) Opportunities to improve value

Our new approach, ABC costing, actively engages every function of an organization by creating process maps and estimating resource costs. This bridges the historical divide that has often led to tensions and stalemates over cost-cutting steps. ABC builds a common information platform that will unleash innovation based on a shared understanding of the actual processes of care. The accurate knowledge of costs helps to make valuable decisions that will lead to more customers.

10) Better distribution of scarce resources and improve resource capacity utilization

This approach identifies how much of each resource's capacity is actually used to perform processes and how much is unused and idle. Managers can clearly see the quantity and cost of unused resource capacity at various levels of functions of management. Resource utilization data also reveal where increasing the supply of certain resources would ease bottlenecks, which would enable more timely care and serve more customers with only a modestly higher expenditure. When managers have better visibility into areas where substantial and expensive unused capacity exists, they can identify the root causes. Other causes of low resource utilization may also be available just in case the need arises. Escalating costs, diminishing resources, increased competition, unhappy customers, and state legislators demanding accountability pressure them to manage costs better. Costing allocates the costs per process of performing different activities so we can clearly identify the capital cost and operation cost. Operational costs are identified precisely and hence the bifurcation of fixed and variable costs aids in the optimum management of scarce resources. In some cases, understanding the actual cost of excess capacity should trigger a discussion on how to best consolidate such expenses to reduce the high costs of unused capacity and improve outcomes. For example, this would help us decide whether to opt for leasing, a rental

basis, or make our own storage provisions by expanding the existing warehouse for inventory management.

11) Eliminate unnecessary process variations and processes that don't add value

In addition to reducing process variations, every activity eliminates steps or entire processes that do not improve outcomes. It also reveals major opportunities for improvements. Comparing process maps and resource costs for various activities and resource costs across multiple sites not only determines how much of the cost difference is attributable to variations in processes but also protocols and productivity, and how many are attributable to supply service costs. For example, recognizing the non-value-added activities will help eliminate them or replace them with new activities at the same cost.

Scope of Costing

- Analyze benefits for productive planning.
- Aid and optimize timekeeping and the decision-making process for pricing while increasing efficiency and standards.
- Improvise the performance in the core activities of the organization with the aid of SWOT analysis, Six Sigma analysis, etc. in management.
- Prune activities to enhance the attributes and increase the value further.
- Manage effective and efficient formulations of strategies, i.e. develop proactive strategies that respond to a highly turbulent and dynamic external environment.
- Reform with innovations to synergize the enterprise.
- Become more competitive in this liberalized world of globalization.

If an enterprise's cost estimates are too high or too low, its risk aversion strategy is incorrect; it may lead to disastrous business decisions. By providing more accurate costs, the ABC system improves the decisions made regarding case mix, procedure utilization and pricing. This system also identifies the activities that need improvement. To improve the management of any activity successfully, the enterprise must understand the activity's resource consumption, outputs and quality of performance. ABC provides information to the enterprise – from support and sustaining activities (i.e. facilities management) to primary activities (i.e. processing

procedures). It goes beyond acting as an accounting system to serve as a strategic management tool.

Running a successful enterprise today requires diagnostic X-ray vision and dynamic resonance imaging. Within this operating environment, the ability to effectively schedule procedures is crucial to maximizing the use of expensive technology, elaborately configured facilities and highly trained personnel. To enhance or optimize operations, the enterprise should perform an activity analysis.

In a nutshell, the further scope would also relate to handling the following inadequacies:

1) Focusing on awareness generation.
2) Classifying and evaluating the mechanism – activity-wise outlining the composition of resources per unit cost.
3) Sharing resources per unit as an indicator to measure progress needs greater scrutiny.
4) Critically addressing the gap pertaining to income from returns.
5) As funding from the central government is subsistence, there is an onus to search for other sources of income.
6) Not only is surveillance required but also a larger number of beneficiaries with a quality education.

Various Methods to Calculate Cost

1) Simple Calculation

$$\frac{\text{Total Cost Incurred for Total Intake of Materials}}{\text{Total Number of Intake of Materials of that Specific Year}}$$

This unit cost is the ratio between total costs and total number of input/enrolments for a particular year, here the average per input is considered.

This unit cost is the ratio between recurrent money costs and number of input for a particular year. Here the capital expenditures are not considered as they are considered non-significant.

2) Cost Per Average Daily Attendance

$$\frac{\text{Recurrent Cost}}{\text{Average Daily Attendance}}$$

This is the average cost on daily attendance basis.

3) Capital Cost per Place

$$\frac{\text{Capital Cost}}{\text{Number of Places}}$$

This formula of cost per place relates and compares the choice of investments to the annual cost per place of different projects. This is like estimating cost in light of the economic life of different projects and the appropriate cash flow at discount rate. This estimates the Comparative Advantage on Demographic basis.

4) Average Cost Per Project

$$\frac{\text{Recurrent Cost}}{\text{No. of Time/Stage Conducted for Particular Projection}}$$

For this purpose, Total cost should be divided into groups of varying sizes for different types of activities or different projects. This projection is the recurrent cost divided by the number of completion stage conducted for a particular project.

5) Average Recurrent Cost Per Input Service

$$\frac{\text{Recurrent Cost}}{\text{No. of Input service}}$$

This formula is mainly of interest to costing researchers and specialists because of its sensitivity to the major variable cost trends. Input service can be in time/course/stage/level by the person

6) Cost Per Output

$$\frac{\text{Total Cost}}{\text{No. of Output}}$$

This is the ratio of total cost and the actual number of output. It is also a ratio of comparison between theoretical costs and real costs divided by the number of output after deducting the waste. This ratio indicates the average real cost and volume of economic wastage.