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Management Control Systems

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PAPER XIV

Management Control Systems

OBJECTIVES

- The main aim of the course is to appraise the students about the concept of Management Control Systems
- The role of Management Control System in efficient management of public system organizations.

Unit - I: The conceptual foundations of control systems

Meaning, Nature and purpose of control systems – The new paradigms of Management Control Systems, four elements of control, organizational structure, organizational goals, organizational climate, strategic planning – Balancing the four levers of control, balancing the tensions in control systems, six sources of tensions in control systems, opportunities and limitations of the span of control, key control variables, delegation and decentralization, mutual supportive management systems.

Unit - II: The traditional instruments of control in organizations

External audit, internal controls, internal audit, role of financial controllers, multiple roles of an auditor, management control process, budgetary control, flexible budget, zero base budget, performance budgeting, master budget, analysis of variance, accounting aspect of control, management audit, marketing and distribution control, different types of audit.

Unit - III: Accountability in organizations

Dual focus and accountability, differentiate between product costing and accountability, the concept of responsibility centre, management

control structure, responsibility accounting, cost centre, profit centre, investment centre, ABC costing, transfer prices, CVP analysis, process control.

Unit - IV: The new dimensions of control with strategies

Behavioral aspect of management control, motivations, morale, participative management, learning curves, HR accounting, knowledge management control, management control with reference to risk management, differentiated controls for different situations, measuring performance to match strategy, balanced score cards.

Unit - V: Management Control in Specialized organizations

Sectoral applications, controlling the financial sector, the banking sector, the balance sheet concept, the concept of schedule of advances, the use of ABC costing standard, insurance, system of insurance accounts, non-profit organizations, legal environment of non-profit organization, public service organizations, public utility accounts, holding company accounts, government and co-operative business, control in projects, the twelve step process of designing controlling system.

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UNIT - I

Learning Objectives

After studying this unit you should be able to,

- Understand the Meaning and Nature of Management Control Systems
- Describe the 4 New Paradigms in Control Systems
- Understand and Explain Robert Simons' Concept of 4 Levers of Control
- Describe the Guidelines for Designing Control Systems
- Explain Interdepartmental Conflicts And Politics Of Control Systems
- Explain the Sources of Tensions in Control Systems and Suggest Ways to Relieve and Balance Them
- Explain the Mutually Supportive Management System (MSM) and Contingency Model

Unit Structure

Lesson 1.1 - The New Paradigms of Management Control Systems

Lesson 1.2 - Control Levers

Lesson 1.3 - Key Controllable Variables

Lesson 1.1 - The New Paradigms of Management Control Systems

Introduction

Management control is a must in any organization that practices decentralization. One view argues that management control systems must fit the firm's strategy. This implies that the strategy is first developed through a formal and rational process, and this strategy then dictates the design of the firm's management systems. An alternative perspective is that strategies emerge through experimentation, which is influenced by the firm's management systems. In this view, management control systems can affect the development of strategies.

When firms operate in industry contexts where environmental changes are predictable, they can use a formal and rational process to develop the strategy first and then design management control systems to execute that strategy. However, in a rapidly changing environment, it is difficult for a firm to formulate the strategy first and then design management systems to execute the chosen strategy. Perhaps, in such contexts, strategies emerge through experimentation and ad hoc processes that are significantly influenced by the firm's management control systems.

The importance of the subject matter is captured in the widely accepted truism that more than 90 percent of businesses including non organizations is founded on the rocks of implementation; either the strategies never come into being or get distorted, or the implementation is much more costly and time-consuming than anticipated. However, laudable strategic intentions may be, if they do not become reality, they usually are not worth the paper on which they are written. Conversely, high-performing companies excel at execution.

Consider the collapse of companies such as Enron, WorldCom, Global Crossing and Tyco. Part of the reason for their demise was the lapse in controls. CEO and top management compensation in these companies

was so heavily tied to stock options that executives were motivated to manipulate financials to buoy the short-term stock price.

Consider world-class companies such as Dell Computer, Walmart, Cisco Systems, New York Times, Emerson Electric, Lincoln Electric, Worthington industries, 3M Corporation, Nucor Corporation, Analog Devices and so on. Their long-term success is not just because they have developed good strategies; more importantly, they have designed systems and processes that energize their employees to execute those strategies; more importantly, they have designed systems and processes that energize their employees to execute those strategies effectively.

The traditional perception of control systems is similar to that of the autocrat through his policemen controlling an unruly mob. But in the twenty-first century the unmistakable forward trend towards empowerment should not go unnoticed. Systems, which are in perfect control without an autocrat and policemen controlling them, would show the profound difference between the concept of controlling persons and that of systems being under control and being able to achieve their goals and objectives with ease. They deserve to be emulated.

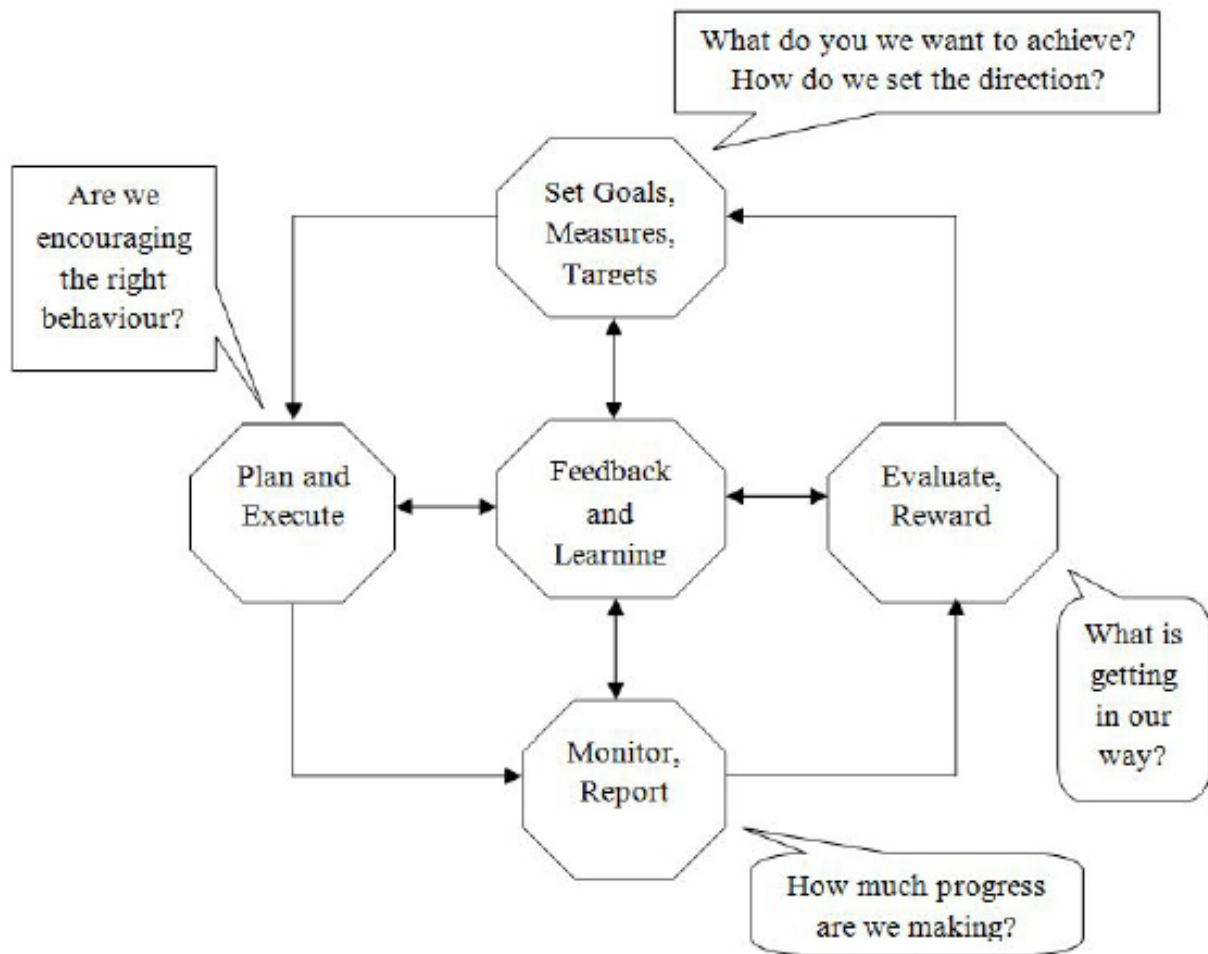
Definition of Management Control Systems

A MCS is a set of interrelated communication structures that facilitates the processing of information for the purpose of assisting managers in coordinating the parts and attaining the purpose of an organization on a continuous basis.

A MCS is a logical integration of techniques, to gather and use information to make planning and control decisions, to motivate employee behaviour, and to evaluate performance.

Purpose and Importance

Imagine that you have the tendency to put on weight. It is in your genes and if you are not careful you might go the same way as several people in your family went earlier. So what do you do? You cut down on your food intake. It might help or may not. You start exercising, but you are alarmed to discover that you are building up a lot of needless muscle. Maybe the exercises you are doing are not suited to your constitution.



The Management Control System

Then you change your method of exercising and you find that it works. You start shedding weight. This is weight control. It gives us control over our body and its functioning. If such control is not exercised, we may not be able to do whatever we set out to do so. In a similar way, organizations need to be in control of them. An organization lacking in controls is bad for its employees and hence, bad for itself in the long run.

The ***purpose*** of all management and control systems is to achieve the goals and objectives of an organization with ease and at least cost. The ultimate purpose of any system is that it should be 'in control' instead of controlling people. It also aims at assisting management in the ***coordination*** of the parts of an organization and the ***steering*** of those parts toward the achievement of its overall purposes, goals and objectives.

The purposes of a management control system are:

- To clearly communicate the organisation's goals;
- To ensure that managers and employees understand the specific actions required of them to achieve organizational goals;
- To communicate results of actions across the organisation; and
- To ensure that managers can adjust to changes in the environment.

A control system is designed to bring ***unity out of the diverse activities*** of an organization as it seeks to fulfil its overall purpose. In the above following diagram shows the components of a management control system.

Basic Concepts

1. Control

Press the accelerator, and your car goes faster. Rotate the steering wheel, and it changes direction. Press the brake pedal, and the car slows or stops. With these devices, you control speed and direction; if any of them is inoperative, the car does not do what you want it to. In other words, it is out of control.

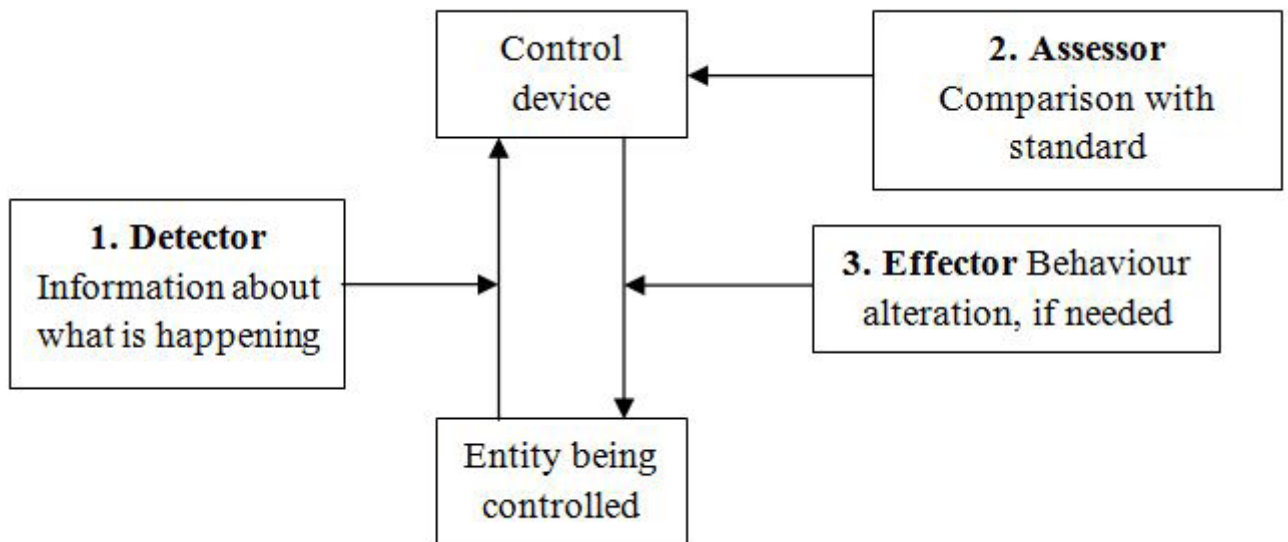
An organization must also be controlled, i.e., devices must be in place to ensure that its strategic intentions are achieved. But controlling an organization is much more complicated than controlling a car.

Elements of a Control System

Every control system has at least four elements:

1. *A detector or sensor* – a device that measures what is actually happening in the process being controlled.
2. *An assessor* – a device that determines the significance of what is actually happening by comparing it with some standard or expectation of what should happen.
3. *An effector* – a device (often called 'feedback') that alters behaviour if the assessor indicates the need to do so.
4. *A communications network* – devices that transmit information between the detector and the assessor and between the assessor and the effector.

These four basic elements of any control system are given in the following diagram.



Elements of the Control Process

The functioning of these four basic elements is described in three examples of increasing complexity; the *thermostat*, which regulates room temperature; the biological process that regulates *body temperature*; and the *driver* of an automobile, who regulates the direction and speed of the vehicle.

Thermostat The components of the thermostat are (i) a thermometer (the detector), which measures the current temperature of a room; (ii) an assessor, which compares the current temperature with the accepted standard for what the temperature should be; (iii) an effector, which prompts a furnace to emit heat (if the actual temperature is lower than the standard) or activates an air conditioner (if the actual temperature is higher than the standard) and which also shuts off these appliances when the temperature reaches the standard level; and (iv) a communications network, which transmits information from the thermometer to the assessor and from the assessor to the heating or cooling element.

Body Temperature Most mammals are born with a built-in standard of desirable body temperature; in humans that standard is 98.6°F. The elements of the control mechanism by which the body strives to maintain that standard are (i) the sensory nerves (detectors) scattered throughout

the body; (ii) the hypothalamus centre in the brain (assessor), which compares information received from detectors with the 98.6°F standard; (iii) the muscles and organs (effectors) that reduce the temperature when it exceeds the standard (via panting and sweating, and opening the skin pores) and raise the temperature when it falls below the standard (via shivering and closing the skin pores); and (iv) the overall communications systems of nerves.

This biological control system is homeostatic – that is, self-regulating. If the system is functioning properly, it automatically corrects for deviations from the standard without requiring conscious effort.

The body temperature control system is more complex than the thermostat, with body sensors scattered throughout the body and hypothalamus directing actions that involve a variety of muscles and organs. It is also more mysterious; scientists know what the hypothalamus does but not how it does it.

Automobile driver Assume you are driving on a highway where the legal (i.e., standard) speed is 65 mph. your control system acts as follows: (i) Your eyes (sensors) measure actual speed by observing the speedometer; (ii) your brain (assessor) compares actual speed with desired speed, and, upon detecting a deviation from the standard, (iii) directs your foot (effector) to ease up or press down on the accelerator; and as in body temperature regulation, your nerves form the communication system that transmits information from eyes to brain and brain to foot.

But just as body temperature regulation is more complicated than the thermostat, so the regulation of a car is more complicated than the regulation of body temperature. This is because there can be no certainty as to what action the brain will direct after receiving and evaluating information from the detector.

For example, once they determine that the car's actual speed exceeds 65 mph, some drivers, wanting to stay within the legal limit, will ease up on the accelerator, while others, for any number of reasons, will not. In this system, control is not automatic; one would have to know something about the personality and circumstances of the driver to predict what the actual speed of the automobile would be at the end point of the process.

2. Management

Management in business and human organization activity is simply the act of getting people together to accomplish desired goals. Management comprises planning, organizing, staffing, leading or directing, and controlling an organization (a group of one or more people or entities) or effort for the purpose of accomplishing a goal. Resourcing encompasses the deployment and manipulation of human resources, financial resources, technological resources, and natural resources.

Management can also refer to the person or people who perform the act(s) of management.

An organization consists of a group of people who work together to achieve certain common goals (in a business organization a major goal is to earn a satisfactory profit). Organizations are led by a hierarchy of managers, with the chief executive officer (CEO) at the top, and the managers of business units, departments, functions and other subunits ranked below him or her in the organizational chart. The complexity of the organization determines the number of layers in the hierarchy. All managers other than the CEO are both superiors and subordinates; they supervise the people in their own units, and they are supervised by the managers to whom they report.

The CEO or a team of senior managers decides on the overall strategies that will enable the organization to meet its goals. Subject to the approval of the CEO, the various business unit managers formulate additional strategies that will enable their respective units to further these goals. The management control process is the process by which managers at all levels ensure that the people they supervise implement their intended strategies.

Management Control Systems versus Simpler Control Processes

- Unlike in the thermostat or body temperature systems, *the standard is not preset*. Rather, it is a result of a conscious planning process. In this process, management decides what the organization should be doing and part of the control process is a comparison of actual accomplishments with these plans. Thus, the control process in an organization involves planning. Management control, however, involves both planning and control.

- Like controlling an automobile, ***management control is not automatic.*** Some detectors in an organization may be mechanical, but the manager often detects important information with her own eyes, ears and other senses. Although she may have routine ways of comparing certain reports of what is happening with standards of what should be happening, the manager must personally perform the assessor function, deciding for herself whether the difference between actual and standard performance is significant enough to warrant action, and if so, what action to take.
- Unlike controlling an automobile, a function performed by a single individual, ***management control requires coordination among individuals.*** An organization consists of many separate parts, and management control must ensure that each part works in harmony with the others, a need that exists only minimally in the case of the various organs that control body temperature and not all in the case of the thermostat.
- The connection for perceiving the need for action to determine the action required to obtain the desired result may not be clear.
- ***Much management control is self control;*** i.e., control is maintained not by an external regulating device like the thermostat, but by managers who are using their own judgement rather than following instructions from a superior.

3. Systems

System is a set of interacting or interdependent entities, real or abstract, forming an integrated whole.

The concept of an “integrated whole” can also be stated in terms of a system embodying a set of relationships which are differentiated from relationships of the set to other elements, and from relationships between an element of the set and elements not a part of the relational regime.

The scientific research field which is engaged in the study of the general properties of systems includes systems theory, systems science and systemic. They investigate the abstract properties of the matter and

organization, searching concepts and principles which are independent of the specific domain, substance, type, or temporal scales of existence.

The term system may also refer to a set of rules that governs behavior or structure.

A system is a prescribed and usually repetitious way of carrying out an activity or a set of activities. Systems are characterized by a more or less rhythmic, coordinated, and recurring series of steps intended to accomplish a specified purpose. The thermostat and the body temperature control processes are examples of systems. Management control systems are far more complex and judgemental.

Most systems share the same common characteristics. These common characteristics include the following:

- Systems are abstractions of reality.
- Systems have structure which is defined by its parts and their composition.
- Systems have behaviour, which involves inputs, processing and outputs of material, information or energy.
- The various parts of a system have functional as well as structural relationships between each other.

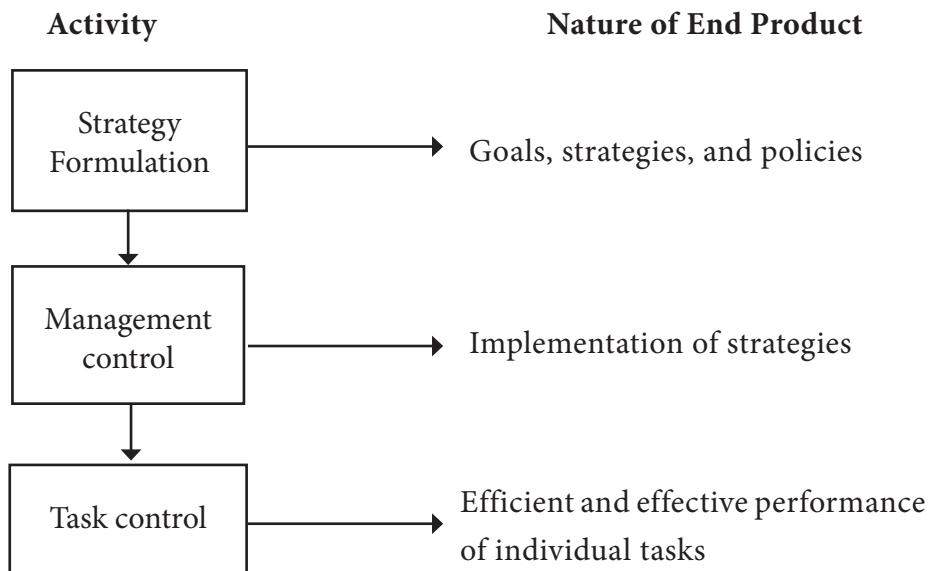
Many management actions are unsystematic. Managers regularly encounter situations for which the rules are not well defined and thus must use their best judgement in deciding what actions to take. The effectiveness of their actions is determined by their skill in dealing with people, not by a rule specific to the system.

If all systems ensure the correct action for all situations, there would be no need for human managers.

Boundaries of Management Control

Management control is distinguished from two other systems or activities that also require both planning and control: strategy formulation and task control. Management control fits between strategy formulation and task control in several respects. Strategy formulation is the least systematic

of the three, task control is the most systematic, and management control lies in between. Strategy formulation focuses on the long run, task control focuses on short run activities, and management control is in between. Strategy formulation uses rough approximations of the future, task control uses current accurate data, and management control is in between.



General Relationships among Planning and Control Functions

Each activity involves both planning and control, but the emphasis varies with the type of activity. The planning process is much more important in strategy formulation, the control process is much more important in task control, and planning and control are of approximately equal importance in management control.

1. Management Control

Management control is the process by which managers influence other members of the organization to implement the organization's strategies.

i. Management Control Activities

Management control involves a variety of activities including

- Planning what the organization should do
- Coordinating the activities of several parts of the organization
- Communicating information

- Evaluating information
- Deciding what, if any, action should be taken
- Influencing people to change their behaviour

ii. Conforming to a budget is not necessarily good, and departure from a budget is not necessarily bad.

Budgets or plans are based on circumstances believed to exist at the time they were formulated. If these circumstances have changed at the time of implementation, the actions dictated by the plan may no longer be appropriate. If a manager discovers a better approach – one more likely than the predetermined plan to achieve the organization's goals – the management control systems should not obstruct its implementation.

iii. Goal Congruence

Organizational goals explain how an organization intends to go about achieving its mission. For example, a car manufacturer might identify its mission as increasing market share and making a profit. Establishing goals of introducing a new model of car each year and providing the highest-quality spare parts to customers will enable it to achieve that mission.

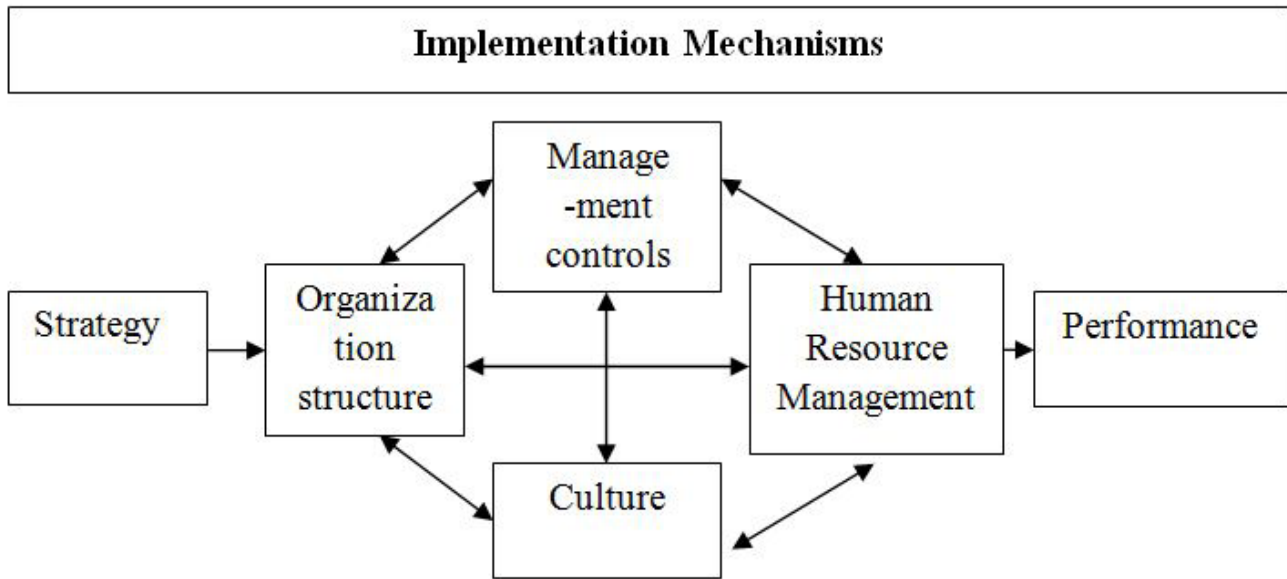
Goal congruence means the goals of an organization's individual members should be consistent with the goals of the organization itself. The management control system should be designed and operated keeping in mind the principle of goal congruence.

iv. Tool for Implementing Strategy

Management control systems help managers move an organization toward its strategic objectives. Therefore, management control focuses primarily on strategy execution.

Apart from management controls, strategies are also implemented through the organisation's structure, its management of human resources, and its particular culture. This is indicated in the following diagram.

Organizational structure: An organizational structure is a mostly hierarchical concept of subordination of entities that collaborate and contribute to serve one common aim.



Framework for Strategy Implementation

Organizational structure allows the expressed allocation of responsibilities for different functions and processes to different entities. Ordinary description of such entities is as branch, site, department, work groups and single people. Contracting of individuals in an organizational structure normally is under timely limited work contracts or work orders or under timely unlimited *employment contracts or program orders*.

It specifies the roles, reporting relationships, and division of responsibilities that shape decision-making within an organization.

Human Resource Management (HRM): Human Resource Management is the strategic and coherent approach to the management of an organization's most valued assets - the people working there who individually and collectively contribute to the achievement of the objectives of the business. In simple sense, Human Resource Management means employing people, developing their resources, utilizing, maintaining and compensating their services in tune with the job and organizational requirement.

HRM is the selection, training, evaluation, promotion, and termination of employees so as to develop the knowledge and skills required to execute organisational strategy.

Organizational Culture

Every organization has an unwritten culture that defines standards of acceptable and unacceptable behavior for employees. After a few months, most employees understand their organization's culture. They know things like how to dress for work, whether rules are rigidly enforced, what kinds of questionable behaviors are sure to get them into trouble and which are likely to be overlooked, the importance of honesty, integrity and the like. While many organizations have sub cultures – often created around the work groups – with an additional and modified set of standards, they still have dominant culture that conveys to all employees those values the organization holds dearest. Members of work groups have to accept the standards implied in the organization's dominant culture if they are to remain in good standing.

Organizational climate

Perhaps one of the most important and significant characteristics of a great workplace is its organizational climate. *Organizational climate*, while defined differently by many researchers and scholars, generally refers to the degree to which an organization focuses on and emphasizes:

- Innovation
- Flexibility
- Appreciation and recognition
- Concern for employee well-being
- Learning and development
- Citizenship and ethics
- Quality performance
- Involvement and empowerment
- Leadership

Organizational climate, manifested in a variety of human resource practices, is an important predictor of organizational success. Numerous studies have found positive relationships between positive organizational climates and various measures of organizational success, most notably for metrics such as sales, staff retention, productivity, customer satisfaction, and profitability

v. Financial and Non-financial Emphasis

Management control systems encompass both financial and nonfinancial performance measures. The financial measures are focused on the monetary “bottom line” – net income, return on equity, etc. But all organizations have nonfinancial objectives – product quality, market share, customer satisfaction, on-time delivery, and employee morale.

vi. Aid in Developing New Strategies

In industries that are subject to rapid environmental changes, management control systems can also provide the basis for considering new strategies. This function, referred to as interactive control, draws management’s attention to both positive and negative developments – that indicate the need for new strategic initiatives. Interactive controls are an integral part of the management control system. This is illustrated below in diagram:



Interactive Controls

2. Strategy Planning & Formulation

Strategic planning is an organization’s process of defining its strategy, or direction, and making decisions on allocating its resources to pursue this strategy, including its capital and people. Various business analysis techniques can be used in strategic planning, including SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) and PEST analysis (Political, Economic, Social, and Technological analysis) or STEER analysis involving Socio-cultural, Technological, Economic, Ecological, and Regulatory factors and EPISTEL (Environment, Political, Informatic, Social, Technological, Economic and Legal)

Strategic planning is the formal consideration of an organization’s future course. All strategic planning deals with at least one of three key questions:

1. “What do we do?”
2. “For whom do we do it?”
3. “How do we excel?”

In many organizations, this is viewed as a process for determining where an organization is going over the next year or more -typically 3 to 5 years, although some extend their vision to 20 years.

In order to determine where it is going, the organization needs to know exactly where it stands, then determine where it wants to go and how it will get there. The resulting document is called the “strategic plan”.

It is also true that strategic planning may be a tool for effectively plotting the direction of a company; however, strategic planning itself cannot foretell exactly how the market will evolve and what issues will surface in the coming days in order to plan your organizational strategy. Therefore, strategic innovation and tinkering with the ‘strategic plan’ have to be a cornerstone strategy for an organization to survive the turbulent business climate.

Strategy formulation is the process of deciding on the goals of the organization and the strategies for attaining these goals.

Goals describe the broad overall aims of an organization and *objectives* describe specific steps to accomplish the goals within a given time frame.

Goals are timeless; they exist until they are changed, and they are changed only rarely. For many businesses, earning a satisfactory return on investment is an important goal; for others, attaining a large market share is equally important. Non-profit also have goals to provide maximum services possible with available funding. In the strategy formulation process, the goals of the organization are usually taken as given, although on occasion strategic thinking can focus on the goals themselves. Strategies are big plans, important plans. They state in a general way the direction in which senior management wants the organization to move. A decision by a automobile manufacturer to produce and sell an electric automobile would be a strategic decision.

The need for formulating strategies usually arises in response to a perceived threat (e.g., a shift in customer tastes, or new government regulations, or market inroads by competitors) or opportunity (e.g., technological innovations, new perceptions of customer behaviour, or the development of new applications for existing products).

A new CEO usually perceives both threats and opportunities differently from how his predecessor did. So changes in strategies occur when a new CEO takes over.

Strategies to address a threat or opportunity can arise from anywhere in an organization and at any time. New ideas do not emanate solely from the R&D team or the head quarters staff. Anyone might come up with a bright idea, which after analysis and discussion can form the basis for a new strategy.

Complete responsibility for strategy formulation should never be assigned to a particular person or organizational unit.

3. Task Control

Task control is the process of ensuring that specified tasks are carried out effectively and efficiently. It is transaction-oriented i.e., it involves the performance of individual tasks according to rules established in the management control process. Task control often consists of seeing that these rules are followed, a function that in some cases does not even require the presence of human beings.

Numerically controlled machine tools, process control computers, and robots are *mechanical task control devices*. Their function involves humans only when the latter proves less expensive or more reliable; this is likely to happen only if unusual events occur so frequently that programming a computer with rules for dealing with these events is not worthwhile.

Many task control *activities are scientific*; i.e., the optimal decision or the appropriate action for bringing an out-of-control condition back to the desired state is predictable within acceptable limits.

For instance, the rules for economic order quantity determine the amount and timing of purchase orders. Task control is the focus of many management science and operations research techniques.

Most of the information in an organization is task control information: the number of items ordered by customers, the pounds of material and units of components used in the manufacture of products, the number of hours worked by employees, and the amount of cash disbursed. Many of an organization's central activities – including procurement, scheduling, order entry, logistics, quality control, and cash management – are task control systems.

The Four Paradigms of Control

The conceptual framework, around which the theme of controls is built, has four aspects to it, which are the four paradigms of control. This needs an understanding of the environment (both internal and external) in which an organization operates and its impact on the organization's control structure.

The four paradigms are

- Adaptability,
- Integration across organization,
- Optimal mix of control and coordination, and
- Reinforcing cooperative instincts.

The First Paradigm

A control system is one that enables organizations to *adapt themselves to their environment*, know what they want and achieve it with optimal effort.

The prime purpose being effective adaptation to the environment, the acid test for their success is their ability to discover for themselves, the best strategies and instruments of control to achieve this task of adaptation. Therefore, the criteria should never be only to see that the lines of command are strict and rigid and that the central authority is in a position to enforce its command adequately.

Example

The success of Indian IT and pharmaceutical firms is mainly due to their understanding of control systems. On the other hand, the great failure of the US aviation industry was due to its inability to adapt itself to the fast-changing consumer demands for this service. The expectations of the average air traveller rapidly changed. They were no longer hooked on to luxurious comfort and superb food. They were looking for cheap fares, easy process of booking on the internet and, of course, prompt and reliable service.

The Second Paradigm

Corporate Governance (Strategic Control) At board Level
Management Control at Senior Level
Process (Operational Control) at Supervisory Level
Task or Transaction Control at the Grass-Root Level

Span of Control

The integration of all activities of an organization is the second paradigm which is described in the diagram. The behaviour of top level is described as corporate governance, senior levels as management controls, supervisory levels as process or operational controls and grass root level as task controls.

All levels are interdependent of each other and it is necessary that at all levels satisfactory controls are in place.

Example

'N', a multinational in the detergent industry, had positioned its product as a superior one with prices much higher than its competitors. Its dealers and sales force realized that this was shutting out many markets. This was conveyed to their board. They therefore decided that they should drastically cut down their prices; they cut them down almost 50%.this required them to drastically cut costs and they undertook a cost ascertainment exercise to pinpoint potential savings.

Among other things, they found that the size of the working capital should be cut down. They had targets for these cuts in costs and the

organization watched the newly accepted norms of cost performance. Thus, the consumption rate of material, wastage, direct labour productivity and machine productivity had to be watched both in aggregate numbers and also as broken down into individual centres of responsibility. They also set up a quality control system to maintain the quality, which was in the danger of getting eroded in the newly found enthusiasm for cutting costs. This was all management control. The processes were streamlined. This was process control. The productivity of every individual was watched as also were the adherence to quality using statistical quality control techniques. This was task control. Thus the entire hierarchy from the top to the bottom was enabled to work together in congruence.

So the integration of the systems at the board level, the senior levels, operational levels and grass root levels have been emphasized in this paradigm.

The Third Paradigm

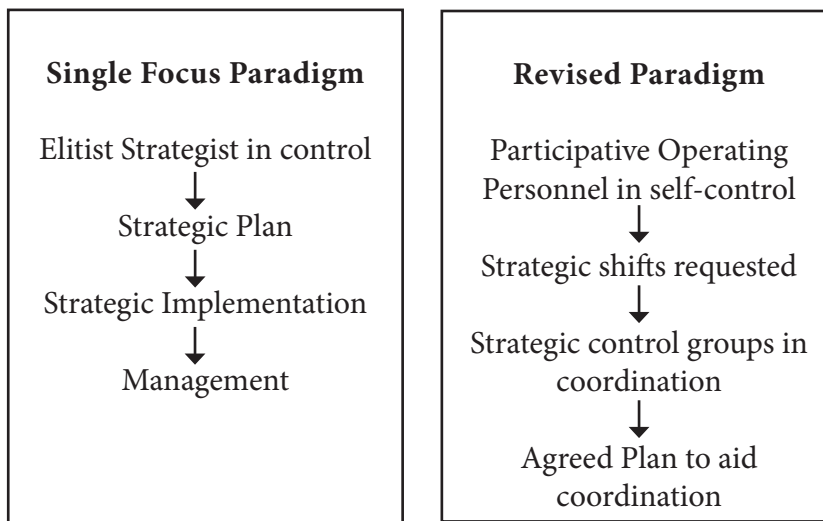
It deals with *coordinating control systems* with self-control and designing and implementing systems for controlling the not-so-sincere people. There is a traditional and modern approach to it.

The Single and Dual Approach

Single focus is on the manner in which leaders could control the not-so-sincere people and systems. Whereas a dual focus is emerging in which it incorporates the need to encourage and build self-control in organizations. Just because no one is 'in control' does not mean that there is 'no control'. In fact, all healthy organizations have processes of control. However, they are distributed processes, not concentrated in any one authoritarian decision maker. We can imagine what would happen if the immune system had to wait for before releasing anti-bodies to fight an infection.

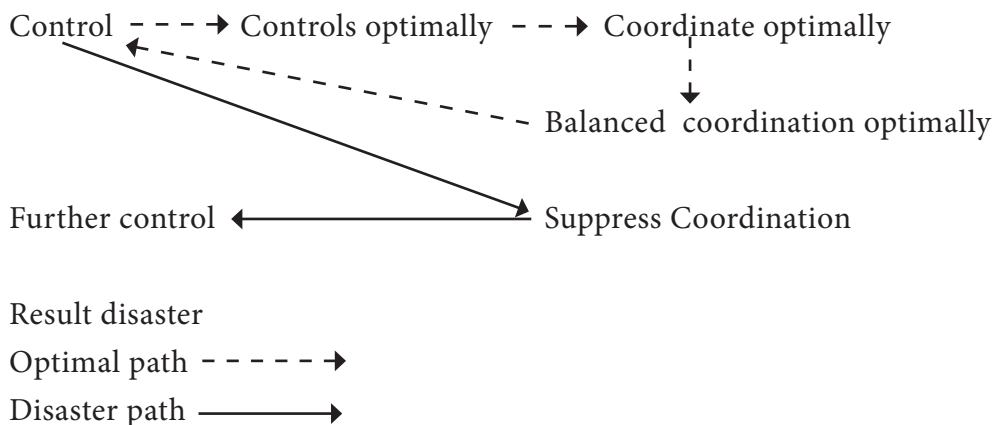
The above diagram shows two alternative paths for control, the single focus and the dual or multiple focuses. The image of the autocrat and policeman in the earlier focus and the emerging trends of empowerment in the altered paradigm of control systems have been invoked here.

The two focus can be described in the following diagram

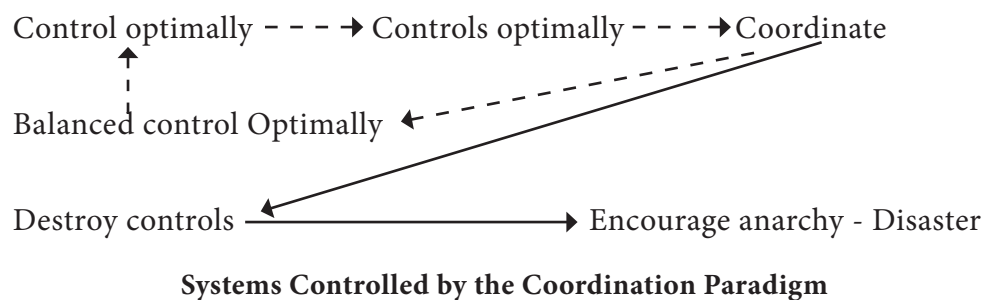


The New Paradigm of Dual Focus in Control Systems

According to the ideas of Harvard’s Robert Simons, one may say that the single focus paradigm is supported by diagnostic systems, which monitor performance against targets and boundary systems of control which punish prohibited behaviour, and establish the revised paradigm supported by belief systems which are the universally accepted ethics of an organization and interactive systems of control which keep the grass roots and other levels constantly in touch with each other, usually informally. Both the paradigms co-exist in organizations.



Systems Controlled by the Control Paradigm



The Fourth Paradigm

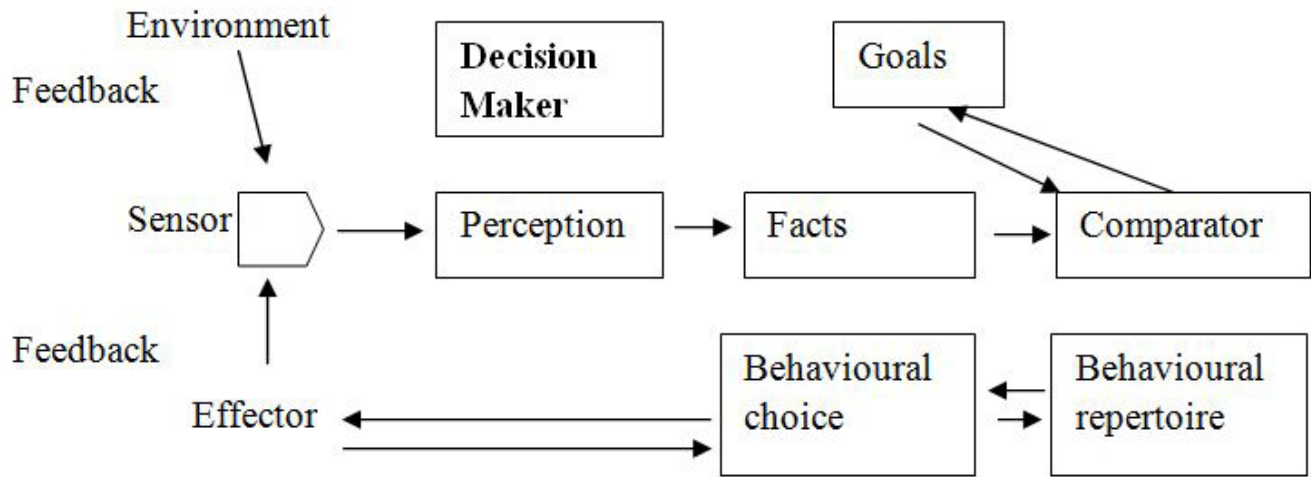
Simons makes very heroic assumptions about human beings that they want to contribute, achieve, innovate and work competently even if they do not have specific external inducements to be so. Systems designers for controls need, however, make sure that there are no organizational blocks to dissuade them to the contrary.

Human beings are quite capable of generating and implementing adaptive control strategies all by themselves, with mutual consultation without an overweening driving force from the top to make them fall in line and work for the organization. Vernon Smith, the Noble Laureate in Economics in the year 2002, calls it 'the ecological rationality arising from the social mind'.

The diagram needs an explanation.

1. The prime mover is the Decision Maker. It is implicitly presumed that the decision maker is on the spot at the interface with the environment using its sensor.
2. Decision Makers have their goals.
3. The sensor gets the feedback from the environment.
4. It forms a perception.
5. It checks the facts or factual premises.
6. It compares factual premises with the goals using the comparator (an engineering term for devises to compare actual with expected).
7. Decision maker may modify the goals through the effector, its agent.
8. It may also choose to modify behaviour.
9. It chooses one of the feasible behavioural alternatives from its repertoire.

10. It effects the change through the effector which is its agent.
11. The effector checks back with the sensor.
12. The feedback loop goes on as the system evolves further and further.



The Cybernetic Paradigm in Control Systems

Lesson 1.2 - Control Levers

The Four Levers of Control

Mechanisms exist to ensure that four things happen in a company. We often hear people say that the company “is on track”. How do they know that? What mechanisms exist that guide the company, its people and its business to stay on track?

As a fast growing company in an ever-changing environment a company focuses on the effective utilization of - as R. Simons of the Harvard Business School calls it - the four levers of control.

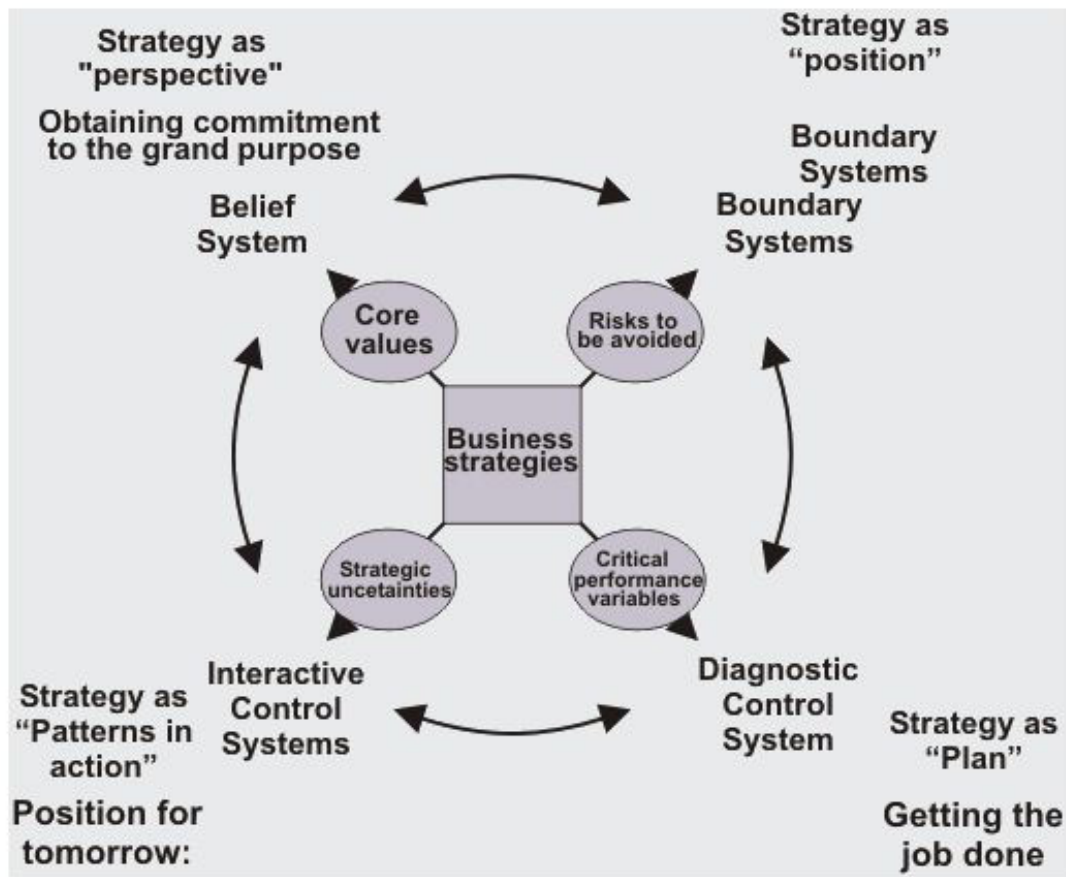
Within the company, mechanisms exist to ensure that four things happen effectively:

- Obtaining commitment to the purpose of the company
- Staking out the territory
- Getting the job done
- Positioning for tomorrow

For each aspect there is a lever of control to ensure it “Stays on track”

The following diagram identifies the four levers of control and gives a holistic view of the dynamics of controlling strategy:

In his book “Levers of control: How Managers use innovative control systems to drive strategic renewal” (1995) Robert Simons introduced the four levers of control framework, giving managers in large companies a framework to manage the tension between (value) creation and control (managing and measuring value).



Four levers of control

The Four Levels of Control are

1. **Core values** (controlled by Belief systems, such as mission statements, vision statements, credos and statements of purpose)
2. **Risks to be Avoided** (controlled by Boundary Systems, such as Codes of conduct, predefined strategic planning methods, asset acquisition regulations, operational guidelines)
3. **Strategic Uncertainties** (controlled by Interactive Control Systems, such as incorporating process data into management interaction, face to face meetings with employees, challenging data, assumptions and action plans of subordinates)
4. **Critical Performance Variables** (controlled by Diagnostic Control Systems, such as output measurement, valuation standards, incentive systems and compensation systems).

I can see that we are dealing with four sets of systems - the four levers - that work together to ensure that the business strategy stays on track. I recognise some of the terms, but can't you give me practical examples that will enable me to get a better picture of what the Four Levels of Control consist of in our company.

Let us explore the What, Why and How of the four levers of control in the company:

LEVER 1: Belief Systems

What: Explicit sets of belief that define basic values, purpose and direction, including

- How value is created
- Level of desired performance
- Human relationships

Why: To provide momentum and guidance to opportunity

- Mission statements
- Vision statements
- Credos
- Statements of purpose

Vernon Smith, the experimental economist, has hypothesized the process of buildup of these beliefs. He says we can study them only through experiments on what would happen if the rules are forcibly alerted; much of his work, which won him the Nobel Prize, was based on such experiments and he still not sure if these processes could be consciously crafted.

Simons advocates proactive building up of belief systems to be worked into designing control systems. He provides practical examples where this has been done.

The better tuned are the belief systems, less cumbersome and expensive would be needed for diagnostic systems and risk-prone will it be to fall a prey to opportunistic behaviour.

The practical methods of building up belief systems are:

1. An explicit set of beliefs, defining values, are incorporated in vision statements and codes of conduct.
2. Senior managers are involved in drafting formal belief statements.
3. Feedback is obtained and awareness surveys are constantly conducted.
4. Top managers put themselves under constant scrutiny to adhere to the belief systems.

LEVER 2: Boundary System

What: Formally stated rules, limits and prescriptions tied to defined sanctions and credible threat to punishment

Why: To allow individual creativity within defined limits of freedom

- Codes of business conduct.
- Strategic planning systems.
- Asset acquisition systems.
- Operational systems

Boundary systems, as conceived by Simons, are the delineation of prohibited areas of behaviour. Thus, typically, prohibitions could be as below:

1. Indulgence in corruption
2. Breaking laws to make short term gains
3. Marketing below par goods even if it means profits and even if there are no legal bars from doing so.
4. Moving products to customers who are in the approved geographical area. This typically happened in India, in the licensees in the telecom sector poached into areas licensed to others. This shook the markets and brought reprisals from the government.
5. Indulgence in inappropriate behaviour with one's colleagues, say typically, sexual harassment.

6. Keeping the task of accounting of transaction in the same hands as transaction operators, e.g., what happened in the Barings Bank scam.

Quite contrary to the understanding that boundary systems restrict the manager's discretion, Simons argues that they enlarge it. Any innovative behaviour, which achieves desired goals and outcomes and which does not cross the boundaries of appropriate behaviour, would be encouraged, and this according Simons actually vastly increases one's discretion. It also pins down accountability to results.

Operational staff is closer to the markets; it does away with the need to consult their superiors at every stage, provided they are not crossing the boundaries. Boundary systems are usually spelt out in codes of conduct.

LEVER 3: Diagnostic Control System

What: Feedback systems that monitor organisational outcomes and correct deviations from preset standards of performance like:

- Profit plans and budgets
- Goals and objectives systems.
- Project monitoring systems.
- Strategic planning systems.

Why:

- To allow effective resource allocation.
- To define goals.

How:

- Set standards.
- Measure outputs.
- Link incentives to goal achievement.

These controls are the simplest and most easily understood of all the systems as they have traditional wisdom of authoritarianism which tends to treat human beings as machines. It was used extensively in feudal systems of all nations, including India. They are also most persuasive even in modern times particularly in bureaucratic organizations.

We can relate diagnostic systems to familiar practices in organizations.

The **standard manner of monitoring outcomes** in a diagnostic system is typically:

1. Profit plans and budgets
2. Balanced scorecards
3. Project monitoring through PERT and CPM
4. Brand revenue monitoring
5. Defining goals

The **benefits** that could come from these are:

1. Effective resource allocation
2. Clarity for defining goals
3. Strong motivation
4. Establishing corrective action
5. Allowing ex post facto evaluation
6. Freeing scarce resources

The **processes involved** in these are:

1. Process of setting standards
2. Processes of measuring outputs
3. Process of setting incentives with achievements

The **stage at which action is necessary:**

1. presetting standards
2. After outcomes are available
3. Feedback is given to correct people

The persons involved in the process are:

1. Senior managers who negotiate goals and receive reports
2. Staff groups who maintain systems, gather data and prepare reports

LEVER 4: Interactive control system

What: Those systems that teams use to advance and develop

Why: To focus organizational attention on strategic uncertainties.

- To provoke the emergence of new initiatives and strategies.
- To ensure that the way we do business relates very closely.
- To the changes in customer needs.

How: By ensuring that:

- Information regarding changes in technologies, customer requirements, supplier strategy, competitor's strategies and team skills are adequately and proactively incorporated into the strategy process.
- The chosen strategy remains appropriate to the business reality and overall company objectives.

Better interaction between the different layers of management in an organization would improve controls. But there is special meaning for this in an era where technological advances are taking place by leaps and bounds and the knowledge of these is traveling swiftly across organizational boundaries aided, undoubtedly, by the revolution taking place in the field of information technology. Individual initiative and thirst for knowledge are increasing and personal aspirations are also soaring.

Example: Interactive Systems in the Music Industry

The erstwhile music company HMV (now called Saregama) was constantly bogged down by obsolescence of its products paradoxically co-existing with stock outs. The root cause of the problem lay with the quick changes in public taste. Thus any strategic plan made by the company soon becomes redundant. The answer to that lay only partly in shortening the

production and distribution process. It primarily lay in top planners being in interactive control with the dealers, sales personnel and other forums so that the products are fashioned appropriately right from the planning stage.

But the wise management would be able to identify the areas and domains in which such interaction is important and the other areas were only diagnostic systems should be used. In such an approach, modification of strategies would emerge from the operating levels quickly.

Simons describes the several repercussions of this approach in different industries. The most novel of these is in the pharmaceutical and surgical instruments industries, where he quotes the practices in Johnson and Johnson, the pharmaceutical giant, in continuously reviewing their budgets with operating levels, which enables them to be in tune with the market and the strategic shifts it calls for. Similarly, in Xerox, the key planner, Raghunathan Sachdev, popularly known as Sach, is constantly in telephonic contact with branches throughout the world, and talking is the key to their effective control, much more than formal reports. He was the hub of the interactive control which complimented the regular diagnostic systems.

Balancing the Four Levers of Control

Implementing strategy effectively requires a balance among the four levers of control. This balance permits the simultaneous balance of strategy as plan, pattern, position and perspective. The extent of application of a particular lever of control or an appropriate mix of them is highly situational and contextual. Thus, for an industry manufacturing a standard product, like supplies for defense establishment, diagnostic systems would be useful in most situations. But in a fashion industry an interactive system is essential.

In the advertisement or IT industry or in research and development or in the film industry, belief systems may be critical. Boundary systems may be important if the cost and risk of breaking the boundaries of proper behaviour are prohibitively expensive. The mix also depends on the organizational structure and cultural history of the organization. Organizations may often need a judicious and cost effective mix of all the systems.

Balancing the Tensions in Control Systems

So far a somewhat optimistic projection of the use of control systems in organizational achievement has been made. But the path to operationalise control systems does not always justify such optimism. The means to implementation of control systems have to contend with several conflicts of choices and conflicts of interests. We will deal now with these conflicts and suggest ways to resolve them since management control systems of modern times are knotted up in tensions. According to the poetic analogy of the Indian philosophic work, the Katho Upanishad, it is veritably like walking on the razors edge.

How can managers:

1. Leverage potential for innovation and ensure adequate control?
2. Drive growth that enhances profitability?
3. Communicate strategy and goals to employees?
4. Organize resources in support of strategy?
5. Measure and track performance toward achieving strategy?
6. Ensure that they are not exposed to undue risk?
7. Link information from employees to strategy makers?

Six Sources of Tensions in Control Systems

Simons lists the six tensions of management control systems. These can be grouped into three categories A, B, and C. They are:

A. Tensions arising due to the need to make strategic choices

1. The tension between profit, growth and control
2. The tension between long-term and short-term needs

B. Tensions due to goal divergence among stakeholders and the efforts needed to imaginatively establish goal congruence.

1. The tension between the several stakeholders all of whom want a bigger share of the pie. Organizations must seem to benefit all those who have a stake in it. Conflict of interest is built into this situation.

2. The tension between the varying and often conflicting motivation of the employees.
3. The tension between different professional aspirations, propensities and functional skills of the different segments of an organization.

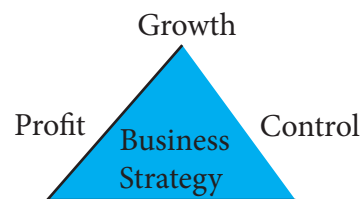
C. Tensions due to limitations managerial of cognitive powers.

1. The tension between the need and desire to seek opportunities and the constraint due to limitation of the span of attention.

Each of these pulls and pressures can be compounded by the fact that the responses to these are spread over different centres of power. The organizations have to ensure that they are in mutual harmony.

I. Profit, Growth and Control

The starting point is learning the basic tension between growth, profit, and control. Firms in the past have focused on growth with little talk about profit. Then there became a huge awakening that resulted in a shift to being profitable. “It is no accident that the Enron failure occurred during this time of heightened scrutiny of profitability,” Simons said. “And this is why they have taken risks with company assets to create profit that is not sustainable.”



Profit, growth and controls are sometimes poised in opposition to each other and the three have to be balanced carefully. This involves judgement. These three are represented as the three corners of a pyramid as shown in the above figure.

Some companies see growth and market share as the ultimate end of their control systems. Growth can be stimulated by heavy advertisements and abnormally low pricing which may be less than the variable costs. The organization gears all its reporting systems to observe growth with little effort to be directed towards profitability after sustainability.

Simons predicts that organizations will now enter an era where the focus will be on controls. This is backwards, he said. Organizations should

first build a control infrastructure. Once the infrastructure is in place, then management can push people hard on profits because the controls are in place as a safety net. After a business is making money it should then push people to grow the business. “It amazes me how many companies forget this very basic progression,” he said.

***Example:** Amir Khan Imagination and daring is not always followed by bankruptcy. The popular Indian actor, Amir Khan, was more cautious. His ventures were well planned and even if they aimed at striking achievement and growth, they maintained effective controls even in an environment of uncertainty. He was able to integrate his central control with freedom provided to all the members of the team. Thus, he is an example of effective harmony between the single focus, and dual focus and profit and growth approaches to control.*

Recognising the Conflict

The balance between profit, growth and control can be struck only by gauging the turbulence in the organization and some early warning signals. The signals can be qualitative or quantitative and it would require some fine tuning to restore the balance.

II. Conflicts Between Long Term and Short Term

Typical features of modern businesses are that, there is a gestation period between the conception of a product and service and its full implementation. Secondly, the rates of obsolescence of many products are high. They have, therefore, product life cycles in which high growth and high initial profits from comparatively smaller volumes is followed by larger volumes with lower individual profit margins but better overall profits, which in turn is followed by a period of declining profits. This cycle is described as the build, hold, and harvest phases of the product life cycle.

In a parallel manner, the groups of people and departments who are involved in the phase of product conception, product launch, and production would be different. The time horizons and control systems for each of these phases of the product life cycle and functional departments would be different.

The methods of measurement of performance regarding short term goals are simpler and may be strongly governed by financial results. Long term projections also rely on financial projections, but evaluation and monitoring of present performance from the point of long term benefits, is an extremely uncertain and difficult task. One has to accept a proxy, which may be only the second or third best measure because it may be easier to handle.

Example: Smart Information Services

Smart Information Services employs very intelligent young IT specialists. They have a scheme of rewarding executives by the profits they rake in for the company. The executives are generally allotted jobs to suit their individual and taste and temperament. Lara was chosen to work on projects which involved modification of standard programmes for the tailor made needs of clients.

This was an easy and well paid job. Rohan on the other hand chose to work for developing independent programmes for a large network of banking activities. This was an intricate and original work and the outcome would take considerable time. They needed repeated testing and lot of bugs had to be removed all the way along. In the last few years, every year Lara's projects generated high profits and she was given a share.

Rohan felt discouraged and left the company and joined Creative Services Ltd., which was more tuned to long-term achievement. In a year he came out with a brilliant idea, which was difficult for competition to imitate. Creative Services, which was a software designing firm became invincible and was assured of monopoly position for the next ten year. Smart lost the race ultimately.

Link with the 'dual focus' concept:

Creative Services believed that its executives could be motivated on their own without short term financial rewards. They may have an inherent desire to innovate and self-actualize. It is therefore, not necessary to push them. A wise system of management control would recognize it and use it for overall good.

The Concept of Goal Congruence

Goal Congruence means consistency or agreement of actions with organizational goals. It identifies the managerial principle that all of a firm's sub goals must be congruent to achieve one central set of objectives.

Integration of goals and effectiveness when team building

The extent that individuals and groups perceive their own goals as being satisfied by the accomplishment of organizational goals is the degree of integration of goals. When organizational goals are shared by all, the term goal congruence can be used.

To illustrate this concept, we can divide an organization into two groups, management and subordinates. The respective goals of these two groups and the resultant attainment of the goals of the organization to which they belong are illustrated in the following Diagram.

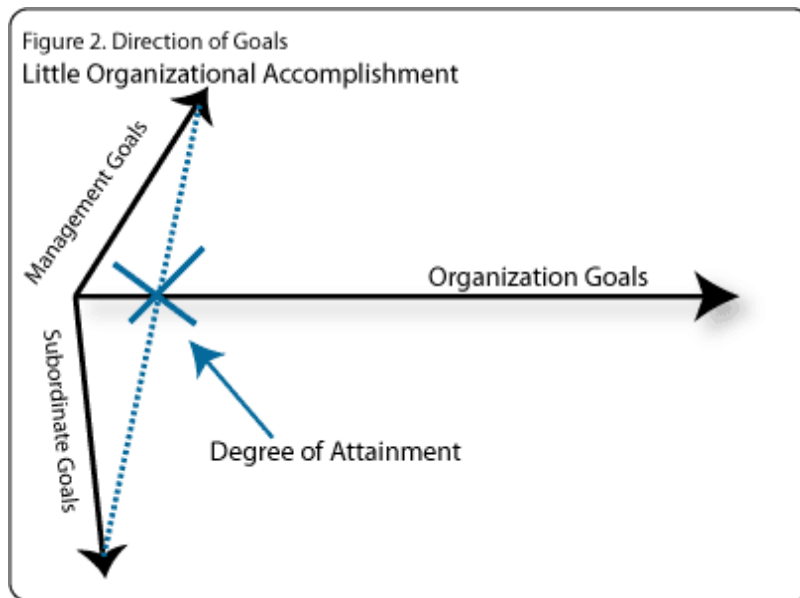


In this instance, the goals of management are somewhat compatible with the goals of the organization but are not exactly the same. On the other hand, the goals of the subordinates are almost at odds with those of the organization.

The result of the interaction between the goals of management and the goals of subordinates is a compromise, and actual performance

is a combination of both. It is at this approximate point that the degree of attainment of the goals of the organization can be pictured.

This situation can be much worse when there is little accomplishment of organizational goals, as illustrated in the following Diagram.



In this situation, there seems to be a general disregard for the welfare of the organization. Both managers and workers see their own goals conflicting with those of the organization.

Consequently, both morale and performance will tend to be low and organizational accomplishment will be negligible. In some cases, the organizational goals can be so opposed that no positive progress is obtained.

The result often is substantial losses, or draining off of assets (see Diagram). In fact, organizations are going out of business every day for these very reasons.

The hope in an organization is to create a climate in which one of two things occurs. The individuals in the organization (both managers and subordinates) either perceive their goals as being the same as the goals of the organization or, although different, see their own goals being satisfied as a direct result of working for the goals of the organization.

Consequently, the closer we can get the individual's goals and objectives to the organization's goals, the greater will be the organizational performance, as illustrated in the following Diagram.



One of the ways, in which effective leaders bridge the gap between the individual's and the organization's goal is by creating a loyalty to themselves and among their followers. They do this by being an influential spokesperson for followers with higher management. These leaders have no difficulty in communicating organizational goals to followers and these people do not find it difficult to associate the acceptance of these goals with accomplishment of their own need satisfaction.

The next three sources of tension are central to the problem of control systems. The issues directly emanate from our philosophic understanding that every person has a right to choose to live one's life. Secondly, it is incorrect to attempt to govern the personal thinking of any person.

Most achievement arises from the combining efforts of people. Different sets of stakeholders in an organization have goals and values which have to be respected. Efforts must be made to identify and operate in areas where we find congruence of goals. It would then operate on the overlapping belief systems of the different constituents who have to cooperate in the organization to keep it under control. Occasionally, one may want to set up boundary systems to discipline the constituents. This

integration of belief systems and boundary systems is the articulation of the harmony between the two foci of control and coordination.

Three sets of stakeholders commonly encountered in organizations

III. Conflict Among Stakeholders

Several group of stakeholders work together in order to contribute to the success of the organization. Often stakeholders are considered a homogenous category juxtapose to shareholders. In reality stakeholders can be strongly conflicting as much as or even more than shareholders. Stakeholders could be described as people having stakes (i.e. interest) in the operations of the organisation. They will include shareholders, managers or employees, customers, suppliers, lenders or government agencies and the public at large.

But working together also inevitably results in conflict on interests between them and a clash of their perceptions during acceptable risk taking. Control systems will have to take all this into consideration. Some people have argued that control systems ought to have a simplified philosophy and that maximizing shareholders' wealth should be the prime objective of any control system. Further, they argue that if shareholders' wealth is maximized, automatically other stakeholders would also benefit.

Example A Non Banking Financial institution (NBFI)

A NBFI with a shareholding of 12% of its assets, collected deposits from various persons with a promise of high interest returns. The depositors were not aware that the organization was investing in risky ventures. Once they came to know of it, they called for a meeting of the trustees of debts who negotiated that they would accept lower rates of interest but they would not indulge in risky ventures. The Indian Companies Act, 1956 provides for the institution of trustees who would perform this negotiation function. However, such transparent working methods are an exception and not the rule.

Further, it must be noted that the shareholders themselves have a floating contract with the organization, and can and do play an opportunistic game of selling off the shares to others in an effort to escape from an

organization which they do not like or which does not conform to their risk-reward profile. Thus, in this example, the shareholders might have invested in organizations in which they were personally interested. If the venture made profits they would have gained but if it ran into losses, the losses would have been that of the depositors.

Thus, the act of balancing the interests of different stakeholders is a continuous one and can and does cause tensions in control systems. In such situations, dual foci of controls would provide a whistle blowing who would bring out the truth and help in resolving the conflict.

IV. Complexities of Employee motivation

All organizations need highly motivated employees so that they work at their maximum potential to work as group to achieve the organizational goals. Employee motivation is complex because employees differ in their own personalities and they are motivated by different factors. That is any manager who wants to motivate employees must recognize the complexity of employee motivation.

Organizational theorists thought that the prime motivating factor at work is money for majority of employees. However, after the Hawthorne experiment it came to light that some group factors and social and work factors also have an effect on employee motivation. However, the degree of the above factors varied from one employee to the next. That is some are mostly motivated by money and some are motivated by recognition, social factors and group factors at work than money. As well, it differs from one organization to the next given the same profile of employees because of the organizational cultural factors and nature of tasks and decision making process and reward equity.

The above discussion shows the complexity of human motivation at work and the factors which affect employees' motivation at work. The managers must be aware that employee motivation theories are only guides and they must use their own information and observation given the context and situation of their organizational internal and external environment to motivate employees effectively to achieve organizational goals. As well, they must thoroughly examine the theory that employees

are only motivated by money doing their own research and observation. This is because, due to complexity of tasks undertaken by employees in modern organization and skill spread and the interdependent nature of tasks. That is, they may be motivated by variety of tasks performed and their work itself and the participation in decision making process. In addition the employees' motivation is affected on the bias of whether their issues are listened by management particularly, when there are changes implemented in the organization.

Every control system has to make assumptions on how managers are motivated. Obviously, a tremendous amount of subjective judgment is involved in this. But one certain thing is that, managers who work on the assumption of neoclassical economists that everyone is a rational economic maximiser, would surely fail in designing control systems. Secondly, there could be strong cultural differences between organizations and between different ethnic groups. Lastly, the history of every organization leaves behind its traces on the employees and what would work in an organization may not work in any other organization. According to the opinion of Vernon Smith, the economist, social groups, if allowed some autonomy would be on their own evolve patterns of ecological rationality which would judiciously co-exist, support and supplement economic rationality.

Example

The management of Pragmati coal mine had a system of manual cutting and loading of coal in coal tubs and payment to workers was based on the number of full tubs they filled. This system had a clear economic rationality. The community of coal miners all came from the same village and were used to working in groups in agricultural fields. They noticed that the overall productivity and earnings would go up in the system introduced by the management, if they distributed their work among groups, with some working on only cutting and some only on loading, some in pushing the tubs and some others removing the water from the site.

A little later, the management introduced mechanized mining, which employed large machines and several people had to work together, some on operation, some on maintenance and some on moving the machines. The miners negotiated the rates related to performance as a group incentive payment and distributed the earnings among themselves. Pragmati recorded

one of the highest productivity levels among the mines in India. Thus without a conscious and deliberate attempt of the management to discipline the miners, the latter found ways of helping themselves and the company as an extension of the cultural traditions they had grown up with. This is a striking illustration of the dual focus of control.

V. Inter-Departmental Conflicts and Politics of Control Systems

Lastly, different organizations need varied types of skills and knowledge and they may be required to work in departments, teams, segments or task groups. Their performances are not measurable in the same way. The geographical spread of organizations also requires regionalization of their working. This inevitably results in conflicts between different groups. This is a major control problem in most large organizations and gives rise to politics of control systems. If social groups could learn to be supportive of each other and creatively self regulate their activities, the splintering of activities and skill groups in modern complex organizations, may contrarily set one group against another. Designers of control systems will have to control the reality of this and devise ways to cope with it.

Example

Adithya iron ore mines were one of the earliest in India to have mechanized operations. But this gave rise to a unique problem that necessitated great cooperation between the mechanical engineers who maintained the machines, the mining engineers who did the mining and the geologists who enabled the mining patches to be chosen intelligently to improve their quality. Sharp measurement techniques to indicate the performance of each of these groups was attempted. But, that was seen to be only a part of the solution.

The repeated persuasive attempts to induce cooperation were not only based on economic incentives but also on appeals to self esteem. The standard cost reports, pinpointing the performance of every department and quantifying it with financial figures, only resulted in mutual accusation. On a particular occasion, it became a matter of national honour to supply the best quality ore to Japan, and in time. The needs for self esteem egged them on to get together and succeed in achieving what appeared to be an impossible task.

Span of Control

Span of control is a term originating in military organization theory, but now used more commonly in business management, particularly human resource management. Span of control refers to the number of subordinates a supervisor has.

In the hierarchical business organization of the past it was not uncommon to see average spans of 1 to 10 or even less. That is, one manager supervised ten employees on average. In the 1980s corporate leaders flattened many organizational structures causing average spans to move closer to 1 to 100. That was made possible primarily by the development of inexpensive information technology. As information technology was developed capable of easing many middle manager tasks – tasks like collecting, manipulating and presenting operational information – upper managers found they could hire fewer middle managers to do more work managing more subordinates for less money.

The current shift to self-directed cross-functional teams and other forms of non-hierarchical structures have made the concept of span of control less salient.

A limitation of the span of control theory is the assumption that narrow span of control means more time for managers to provide support and encouragement to their staff.

Any control system would have to be geared to spot opportunities for the organization and make full use of them. Unfortunately, it is quite impossible for managers with their limited talent and time to tackle every such opportunity competently. Robert Simons covers this dilemma by an omnibus concept of managers being driven by bounded rationality and not absolute rationality. Simon's ideas were based on the practical reality that information was too voluminous and too complex to be available on the turn of a tap to the operating executive. Nevertheless, they have to take decisions on the basis of the limited information with them. Their decisions are therefore described as 'bounded rationalities'. Absolute rationality can never be practically achieved as information can never be perfect. This concept can be tackled by using the concept of 'Return on Management'.

Return on Management (ROM)

The classic business ratios for measuring performance--return on equity, return on assets, and return on sales, to name a few--may be useful. But none is designed specifically to reflect how well a company implements its strategy. Enter return on management (ROM), a new ratio that gauges the payback from a company's scarcest resource: managers' time and energy. Unlike other business ratios, ROM is a rough estimate, not an exact percentage. Still, it is expressed like other business ratios by an equation in which the output is maximized by a high numerator and a low denominator: Knowing which organizational factors conspire against or work to maximize an organization's productive energy will help managers calculate a rough measure for this equation. Harvard Business School Professor Robert Simons and HBS doctoral student Antonio Davila offer five "acid tests" to help managers measure their company's ROM.

ROM = Amount of Productive Organizational Energy Released / Amount of Management Time and Attention Invested.

Lesson 1.3 - Key Controllable Variables

Key Controllable Variables

One of the dreams of neo-classical economists is to have the different departments, segments, or regions, work as if each one of them is a separate organization. According to this view, market systems judge and rewarded each one of them by their profits. This will result in the overall good of the organization and even of society. Those who actually practice management or economists who are closer to management sciences have realized the difficulty of pursuing this manner of control all the way. Thus, how do we work out the profits of the HR function, the training function, the public relations function, the research and development function, and so on.

These functions have typical discretionary expenditure. They are in contrast to production functions that are governed by engineered costs. In discretionary items, there are difficulties in evaluating the output in monetary terms. Secondly, there is also difficulty in quantifying the correlation between inputs and outputs.

The concept of loosely-coupled systems and the key control variables to evaluate the various departments can be illustrated.

Research and Development: *New innovations which have profit potential, the time taken for converting an idea into a saleable product, cost incurred for innovations, compared to reasonable standards.*

Purchase Department: *Cultivating and sustaining good vendor development and vendor relation, keeping the production line continuously fed and avoiding stock outs, keeping the cost of purchase low and reasonable, developing alternate sources of supply to be used when the need arises.*

Maintenance Department: *Minimize down time of machinery, developing preventive maintenance schedule of training.*

Training Department: *Correctly identifying training needs of the employees, developing cost-effective ways.*

It is an organic link but should operate in complex organizations, as it would in biological systems. A loosely-coupled system is like a train that has carriages coupled with links, which can twist and turn as the train takes a curve. If it were rigidly coupled, the whole train would collapse. These control variables of each sub-unit of the organization must surely be congruent with the overall objective of the organization, which is usually the profit. But this measurement of performance cannot be made in a mechanically manner. There has to be an overall understanding of how the sub-units' performance would benefit the organisation as a whole. This is the essence of the belief systems which harmonises the dual focus approach.

Key Success Variables

Key control variables are for evaluating different segments of an organisation. The concept of key success variable assumes that every segment of an organisation has its eyes and ears open and watches those factors that would affect its well-being. These variables may not be under the control of the department but nevertheless responses to these variables are critically for success.

There are five factors that affect the key success variables.

Industry characteristics

Typically in the hotel industry and the airlines, the fixed costs are very high compared to variable costs and occupancy is the critical success variable for the consultancies and the contract industry, the critical success factor is timely delivery.

Competitive strategy

One can choose either to provide a premium product in which the competitive feature would be primarily one of the quality or novelty, or a standard product that provides a product of acceptable quality at reasonable prices. This line of thinking is attributed to the Harvard Professor, Michael Porter.

Environmental forces

These are critical in industries that affect the environment either by pollution or by destroying resources which cannot be regenerated easily. This would be an important success variable in petroleum refineries, paper industry, chemical industry and few others. Some industries specially attend to ethical treatment of environment and maintaining sustainable development. This is now a world-wide movement. Some industries which have scant respect are confronted with closures by regulators or by activist groups. The US based Mangalore Power Company has to close short recently because the employees were brutally assaulted by activists.

Significant Problems

Some industries have unique problems, for example, the banking and finance industries have special problems in assessing credit-worthiness of those who wish to borrow from them. The film industry, the music industry, the fashion industry or even the publishing industry have to keep in mind precarious factor of public taste.

Functional Issues

Treasurers and finance executives have to watch interest rates and production departments have to watch for quality expectations vis-à-vis their performance.

Delegation

Delegation (also called deputation) is the assignment of authority and responsibility to another person (normally from a manager to a subordinate) to carry out specific activities. However the person who delegated the work remains accountable for the outcome of the delegate work. It allows a subordinate to make decisions, i.e. it is a shift of decision-making authority from one organizational level to a lower one. Delegation, if properly done, is not abdication. The opposite of effective delegation is micromanagement, where a manager provides too much input, direction, and review of delegated work.

Decentralization

Decentralization is the process of dispersing decision-making governance closer to the people or citizen. It includes the dispersal of administration or governance in sectors or areas like engineering, management science, political science, political economy, sociology and economics. Decentralization is also possible in the dispersal of population and employment. Law, science and technological advancements lead to highly decentralized human endeavours.

A central theme in decentralization is the difference between hierarchies, based on:

- Authority: two players in an unequal-power relationship; and
- An interface: a lateral relationship between two players of roughly equal power.

The more decentralized a system is, the more it relies on lateral relationships, and the less it can rely on command or force. In most branches of engineering and economics, decentralization is narrowly defined as the study of markets and interfaces between parts of a system. This is most highly developed as general systems theory and neoclassical political economy.

Delegation and Decentralization

The extent of both delegation and decentralization would depend on complex factors that cover transaction costs associated with information transfer and delay in decision-making, the transaction gains of better optimal use of resources in centralization, hindrances to information sharing in decentralization, and so on. Much depends upon the culture, traditions and mindset of employees.

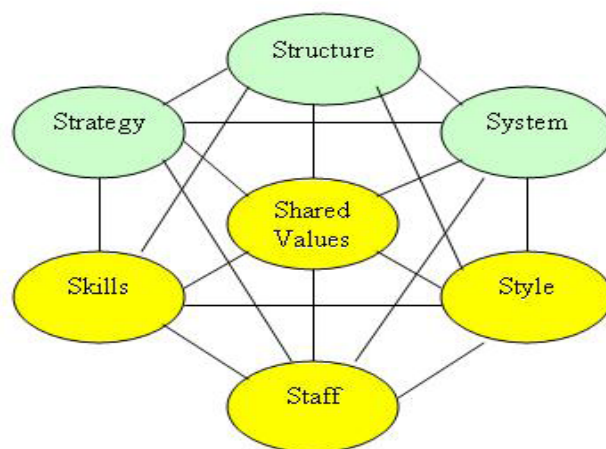
Formal structures of delegations are given below:

1. Organizations having unrelated diversification will tend to be decentralized.
2. Organizations with very high capital intensities will tend to be centralized.

3. Organizations having technologies with much greater long term benefits as compared with short term profits will be centralized.
4. Organizations having a great impact on environment will tend to be centralized.
5. Organizations in which scarce resources of material, talent and skills have to be shared with several parts of the organization will tend to be centralized.
6. Research and development, which is process-oriented, will tend to be decentralized to production units, whereas those which are product-oriented will tend to be centralized at the corporate office.
7. Organizations in which the actions of one part of the organization will affect another part of the organization will tend to be centralized.
8. Organizations that indulge in corruption will tend to centralize.
9. Organizations in which there is great interdependence among the parts of the organization will tend to become centralized.
10. Research and development costs being discretionary costs, the decision on their total amount will tend to be determined centrally, whereas the controls on its expenditure will tend to be delegated without undue interference.
11. In situations where there are great difficulties in reducing man power, organizations would tend to keep recruitment decisions to a centralized authority.
12. Asset acquisitions are usually centralised in most organisations, as temptations at local operational levels to gain short term advantage by adding assets, is a common failing of local executives.
13. Where cost-effectiveness, logistical advantages and synergies results if we do production planning centrally, these powers are usually not delegated to divisions.
14. Managerial cadres are trained in the ways of the organisations as a whole, and their postings are usually flexible and therefore are centralized.

Mutually Supportive Management Systems (MSM) and the Contingency Model

The effective operation of control systems is a culmination of the mutual support of several systems, most of all the formal and informal. They are however, somewhat discursive in the description of the mutual supportive systems. A more explicit conceptual support for the concept is from the Mackenzie framework of the Seven Ss – strategy, structure, system, style, staffing, skills and shared values. Their mutual linkages can be understood from the diagram below:



Mackenzie framework of the Seven Ss

The organization is not just the structure; rather it is made up of seven elements, shown above. These are divided into two types: Hard and Soft. Elements in green are hard; they are easy to identify and feasible. They can be found in strategy elements, corporate plans, organizational structures and other documentations. The soft elements are hard to describe. They are sort of intangible. Hence it is more difficult to plan or influence these elements.

Effective organizations achieve a fit between all these seven elements. If one element changes, then, it will affect all the others. For example, a change in HR-systems like internal career plans and management training will have an impact on organizational culture (management style) and thus will affect structures, processes, and finally characteristic competences of the organization.

In any change process in an organization, more focus is given on hard S's and often soft S's are ignored. This is not a good strategy. It is difficult to build new structures and strategies upon inappropriate cultures and values. Many M&A fail because of the clash of culture, value and style. Hence 7S model is an effective tool in initiating change process in the organization. One should look at the current status of these seven elements in the organization and compare with the ideal state. Then make and plan and implement them.

Let us describe these elements one by one:

- **Staff** - Number of Staff; How people are hired, integrated, developed, and socialized into the organization
- **Skills** - The distinctive skills, capabilities, and competencies that reside in the organization
- **Strategies** - The initiatives that the organization has chosen to gain sustainable competitive advantage and reach its vision
- **Structures** - The organizational structure, roles, and other frameworks that the organization uses to guide activities
- **Systems** - The formal and informal processes and procedures that support and govern activities
- **Style of Leadership** - The leadership approach of top management
- **Shared Values** - The guiding concepts and principles used to guide behavior in the organization

Summary

A system is a prescribed way of carrying out any activity or set of activities. The systems used by management to control the activities of an organisation are called the management control system. Management control is the process by which managers influence other members of the organisation to implement the organization's strategies. Management control is facilitated by a formal system that includes a recurring cycle of activities.

Management control is one of three planning and control functions that are present in almost every organisation. The other two are strategy

formulation, the largely unsystematic process of identifying threats and opportunities and deciding on new strategies in response; and task control, the process of ensuring that specified tasks are carried out efficiently and effectively.

There are four new paradigms in control systems. First, that one needs to concentrate to ensure that organisations are under control rather than concentrate on controlling individual members. Second, that control systems are spread over the entire hierarchical structure and the systems appropriate to the different levels of hierarchy are variously described as corporate governance, management control, process control and task control. The interdependence of these systems is explained. The third paradigm is that controlling and coordination have to be balanced as they are mutually supportive of each other. The fourth and last paradigm is that human beings are not only economic maximisers but also social creatures who have the propensity to cooperative and innovate, and that control systems need to fully encourage and use this for organizational advantage and empowerment of employees.

Robert Simons' concept of the four levels of control, namely, diagnostic systems, interactive systems, belief systems and boundary systems are described, as also the manner in which they should be combined appropriately. Newman's twelve point guidelines for designing control systems are described.

The lesson also describes the six sources of tensions in control systems and suggests ways to relieve them. Tensions arise due to the options available in choice of strategies, due to problems in generating goal congruence between different stakeholders, employees and departments and the limitations of the maximum feasible span of control.

The contingency model of the best-fit structure, strategy, skill, staffing, shared belief, style and systems is explained. The thumb rules for formal delegations and decentralization is provided.

Self Assessment Questions

1. Define Management control systems. Explain the nature and purpose of control systems.
2. What are the four new paradigms in control systems?
3. Describe the four elements of control.
4. Explain Robert Simons' concept of four levers of control.
5. How would you balance the four levers of control?
6. What are Newman's twelve point guidelines for designing control systems?
7. Describe the six sources of tensions in control systems and suggest ways to relieve them. How would you balance the tensions in control systems?
8. Explain the contingency model.
9. What are the thumb rules for delegations and decentralizations?
10. Define Span of control. What are the opportunities and limitations of the span of control?
11. Explain Key control variables.
12. What do you mean by Mutual Supportive Management Systems?

CASE STUDY

Milk Products Limited is engaged in collecting, processing and distributing milk and milk products in a large city in South India. Most of the products of the company are such that these have to be distributed on daily basis. The company has a crew of distributors who approach the fixed customers, both bulk buyers and individuals. Mr. K. Ramesh joined the crew of distributors after graduating in Commerce. The distribution manager was quite impressed by Mr. Ramesh but initially could not offer him a better job than that of a distributor. However, he promised to give him better opportunity whenever available. Mr. Ramesh joined gladly.

The distributors are employed on monthly salary basis. In order to ensure distributions of the products, the company has a provision of overtime pay. Normally, crew members work slowly in the beginning just to accumulate overtime pay. The pace becomes hectic towards the end of

the day with some over time to meet the distributions schedule. There is no group leader but there are several old-timers who influence newcomers regarding the work rules. Mr.Ramesh did not like this method of working but had to follow the group to be a good team mate. He gathered that over the years, the company had paid around sixty per cent overtime unnecessarily.

After a year, impressed by the work of Mr.Ramesh and his overall suitability, the distribution manager offered him the position of distribution supervisor. The basis duty of supervisor was to look after the distribution system and to develop new customers in a given area. Beside Mr.Ramesh, there were four other supervisors also. Mr.Ramesh was sure of making distribution system effective as he was aware about the delaying tactics of the crew. He was quite sure about cutting the overtime cost and impressing upon the manager about fixing the quota of work per day in two parts before lunch and after lunch. The distribution manager left convinced and introduced the system. However the efficiency dropped down considerably and no crew member was near the target.

Questions

- (a) What were the reasons for decreased efficiency in the new system.
- (b) Advise Mr.Ramesh and distribution manager about the future courses of action.

UNIT - II

Learning Objectives

After Studying this Unit you should be able to,

- Know the Meaning of Auditing
- Gain Knowledge on Internal Control
- Distinguish Between Internal and External Audit
- Be Familiar About the Types of Audit
- Say the Role Played by an Auditor
- State the Stages in Management Control Process
- Give the Meaning and Administration of Budgetary Control.
- List the Different Types of Budgets.
- Understand the Meaning and Purpose of Variance Analysis
- Explain how Control Process is Followed in Marketing Activities of the Firm.

Unit Structure

Lesson 2.1 – The traditional instruments of control in organisations
- Auditing

Lesson 2.2 - Management Control Process

Lesson 2.3 - Budgetary Control and Analysis of Variance

Lesson 2.4 - Marketing and Distribution control

Lesson 2.1 - The Traditional Instruments of Control in Organisations - Auditing

Meaning and Objectives of Auditing

An Audit is an examination of accounting records of a business concern. Auditing is done with a view to check whether the books of accounts correctly and truly reflect the transactions to which they purport to relate. Thus Auditing refers to checking of books of accounts of a firm in order to ensure their reliability and the reliability of the income statements made from them.

In the words of Montgomery “ Auditing is a systematic examination of the books and records of a business or other organization, in order to ascertain or verify to report upon the facts regarding its financial operations and the result thereof”

Objectives of Auditing

The objectives for carrying out Auditing can be discussed under three heads. They are:

- Primary objectives
- Secondary objectives
- Specific objectives.

Primary objectives are to check truthfulness of the books of accounts. That is to see whether they reflect the true and fair view of state of affairs of the business concern. Therefore the primary objectives to determine whether the financial statements depict the true and impartial view of financial position and working results of an organization.

Secondary objective is aimed at detection and prevention of errors and fraud and also check the Misrepresentation of accounts.

Specific objective is fixed depending up on the nature and subject matter of the Audit. For example in a Management Audit the Specific objective is to promote the operational efficiency of the managerial functions, also identify the areas of weakness.

Internal Control

Internal control refers to the entire system of control employed by the management in order to carry on the business of the organization in an orderly and efficient way, by using an automatic check and balance all the transactions. It has in itself internal check, internal audit and other tools of control. Internal control system gives assurance to the management that the information it receives is both reliable and accurate. It also ensures that assets are secure and policies of the management are being followed properly. It not only guarantees management on the reliability of accounting information, the independent auditors also rely on system of internal control in determining the timing, nature, and extent of their audit work.

Definition of Internal Control

The American Institute of Certified Public Accountants (AICPA) has defined internal control as “The plan of organization and all the coordinate methods and measures adopted within a business to safeguard its assets, check the accuracy and the reliability of its accounting data, promote operational efficiency and encourage adherence to prescribed managerial policies. A system of internal control extends beyond those matters which relate directly to the functions of the accounting and financial departments”.

According to The Institute of Chartered Accountants of England and Wales (ICAEW) “Internal Control means not only internal check or internal audit, but the whole system of control, financial and otherwise, established by the management in order to carry on the business of the company in an orderly manner, safeguard its assets and secure as far as possible accuracy and reliability of its records”.

From the above two definitions it is clear that internal control is a broad term with a wide area of operation. It includes a number of methods

and measures, which are exercised by the management to ensure smooth and economic functioning of business entity. It aids management in the performance of various functions. Internal control facilitates the external audit also as it assures the external auditors that the information supplied to them is accurate and reliable.

Difference between Internal Audit and Internal Control

The points of difference between internal audit and internal control can be stated as under:

1. Internal audit. It is an appraisal activity carried out within an organization to review the operations and records so as to serve the management and is done by specially assigned staff.
2. Internal control. By internal control, it means not only internal check and internal audit but the whole system of controls—financial and otherwise, established by the management in the conduct of a business in an orderly manner, safeguard its assets and maintains the accuracy and reliability of its operations and records.

Thus it is clear that internal control comprehensive in nature and it includes internal check and internal audit in itself.

Objectives of Internal Control

The internal control system aims at providing reasonable assurance to the clients that:

1. Records are valid, complete, and accurate.
2. Recorded transactions are duly authorized.
3. Transactions are properly classified and valued.
4. Transactions are recorded at proper time.
5. Transactions are properly posted to the ledger accounts, and correctly summarized.

Advantages of Internal Control System

The presence of an efficient system of internal control can be of great help to the management as well as to the auditor because it has the following advantages:

1. Gives Assurance to the management on the accuracy and reliability of all the financial and operating information it receives.
2. Minimizes the occurrence of frauds and errors.
3. Safeguards assets against any misuse.
4. Promotes operational efficiency and prevents wastages.
5. Judges operating efficiency and highlights weaknesses.
6. Encourages adherence to the established managerial policies.

Forms of Internal Control

The definition of internal control given by The American Institute of Certified Public Accountants (AICPA) indicates that internal control goes beyond the accounting functions of the organization and incorporates both accounting and administrative controls.

Accounting controls. Accounting control concerned with the controls related to the accounting system, i.e., checking transactions as per the prescribed procedures and safeguarding the assets.

Accounting control consists of the following:

- a. Budgetary control
- b. Standard costing and deviation analysis
- c. Internal check
- d. Internal audit
- e. Bank reconciliation
- f. Self-balancing ledgers, etc.

Administrative control

Administrative control comprises the following:

- a. Time studies
- b. Motion studies
- c. Quality control
- d. Performance appraisal
- e. Statistical analysis, etc.

Requisites of Good Internal Control

1. A properly designed accounting system is required to be in operation. Financial and accounting operations must be separated. Different persons must be entrusted with the responsibility of handling cash and the recording of the movement of cash.
2. Presence of well designed organization structure is important. So that Responsibility for the performance of the job can be clearly stated, hence there remains no room for doubt or confusion. Too much confidence should not be pinned in one individual. Nearly all frauds are committed by 'trusted' officials or employees.
3. Rotation principle relating to transfer of an employee from one job to another should be the inflexible guiding rule. This is an effective safeguard against collusion and is recognized as an important canon of sound organization.
4. Mechanization of the work wherever possible can be adopted. Mechanical devices such as cash register, recording time clocks, calculation machines, etc. should be introduced.
5. The work should be so arranged that work done by one employee could be promptly checked by another independent employee. Such continuous and constant checking stimulates moral control and also the errors and the frauds cannot go undetected.
6. A written record of work done by each employee should be maintained and the work should pass through several hands in a well-defined manner.
7. Clear and well-defined rules should be laid down and practically followed relating to dealing of the cash, ordering, receiving and issuing goods, etc. Instructions should be in writing in the form of accounting manuals.
8. Employees must be in bond so that the tempted employee will be deterred from committing fraud and employer be protected.
9. Although not a substitute for protective financial internal control, yet existence of an efficient internal auditing staff is an important element of an effective internal control system.

Internal Control and the Auditor

The auditor should review the system of internal control, before starting the audit, for the following purposes:

1. To examine the weaknesses of system, if any.
2. To consider the chances using test check to during the course of audit.
3. Based upon the first two considerations find out exactly the amount of work to be performed so as to enable the auditor to give his opinion on the given set of accounts.

The effectiveness of the system in practice should be tested to form an opinion that whatever existed on the paper did exist in practice too. A proper and effective system of internal control offers the following advantages:

- a. Reduces the time required to carry out audit.
- b. Reduces the cost of conducting audit
- c. Assures the auditor on the reliability of the financial information.

The review of the system of internal control could be done by collecting data using a questionnaire or by oral questioning in respect of each aspect of business.

The auditor should obtain a statement in writing, containing the details of internal control in practice. The presence of a good internal control reduces the work of an auditor to a greater extent, but does not reduce his liability. Dependence of the auditor on the system will be based on the circumstances of each particular case, and the efficiency of the audit will depend upon the skill, tact, experience, and above all, the skill of judgment of the auditor.

Techniques for Evaluation of Internal Control System

There are four techniques evaluating internal controls. These are:

Oral approach. Oral discussion is held to identify strengths and weaknesses.

Memorandum approach. Full notes are taken during discussions governing evaluation of internal controls. Analysis of weaknesses is undertaken and suggestions are offered through management letter for improvement.

Internal control questionnaire (ICQ). An ICQ consists of questions in respect of each element of business. Questionnaire contains close end questions.

Flow charts. A flow chart is a graphic representation of a system in use. It depicts the various operations, control measures, and steps included in a system through graphic symbols. A flow chart provides a simple, concise and comprehensive view of what is happening within the organization. It explains what documents or information are raised, how they are treated, details on the circulation of cash and goods, and actions taken there off. Flow charts of each business activity are reviewed and internal controls are evaluated.

Internal Audit and External Audit

The internal audit is a continuous review of operations of a business concern and is done by the staff assigned for the purpose. It operates independently of the internal check system in the organization.

The Institute of Internal Auditors, USA, has defined internal audit as under:

“Internal auditing is an independent appraisal activity within an organization for the review of operations as a service to management. It is a managerial control which functions by measuring and evaluating the effectiveness of other controls.”

Scope of Internal Audit

The Institute of Internal Auditors, USA, has defined the scope of internal audit:” It involves examination and evaluation of the adequacy and effectiveness of the organization’s internal control system and the quality of performance in carrying out assigned responsibilities

Significance of Internal Audit

Generally internal auditor focus on the following areas so as to review their operations:

1. Reliability and integrity of information.
2. Compliance with policies, plans, procedures, laws and regulations.
3. Safeguarding of assets.
4. Economical and efficient use of resources.
5. Accomplishment of established objectives and goals for operations or programmes.

From the above one can concluded that the concept of internal audit not only covers the traditional functions of a concern but also has emphasis on new and modern areas such as reviewing the economic and efficient use of resources and watching the organizational performance.

Objectives of Internal Audit

The important objective of internal audit is early detection of errors and frauds. The following are it other objectives:

1. Review of operations as a service to management.
2. Facilitating final audit.
3. Ensuring systematic accounting and proper recording of transactions.
4. Verification of authenticity and correctness of the financial information presented to the management.
5. Review of system of internal check from time to time.
6. Reduce the chances for manipulation of accounts or misuse of property of the business.
7. Early finalization of annual accounts.
8. Highlighting the weak areas of the organization and giving suggestions to strengthen them.

Internal Auditing involves the review of the following aspects of business operations:

1. Evaluation of internal control

This should test the adequacy of accounting system from the following viewpoints:

- a. Information is adequate and accurate.
- b. Resources of business are protected against losses resulting from
 - Theft,
 - Embezzlement, or
 - Carelessness.

2. Review of accounting efficiency

This should cover the following aspects to ensure that:

- a. Procedures are effective.
- b. Mechanical and electronic equipment is used.
- c. Space is fully utilized.
- d. Staffs are adequate.
- e. An accredited programme is used for weeding out old records and retaining the current and relevant ones.

3. Appraisal of performance of organization

This includes the following aspects:

- a. Implementation.
- b. Compliance with procedures.
- c. Review of individual performance.
- d. Checking up of plan of organization.

4. Place of an internal auditor in the organization

Internal auditor carries out a staff function rather than a line one. Hence, an internal auditor cannot exercise direct authority over other persons. However, he is free to appraise and review policies, plans, procedures and records. He enjoys independence for ensuring objectivity. He gets support from management to perform his job efficiently and effectively.

5. Internal audit report

The main work of internal auditor is to prepare reports on his findings and give recommendations. The report prepared should focus on the following aspects:

- a. The report should be carefully prepared and well written.
- b. It should be designed to draw and hold the attention of the person to whom it is presented.
- c. Conclusions and recommendations must be clearly and briefly written.
- d. Main ideas are to be stated in the body of the report and supporting details can be shown as exhibits.
- e. Rough draft of the report may be reviewed and discussed before final submission.
- f. The report should high light Specific improvements need to be made.
- g. Follow-up is needed to ensure action on the findings and
- h. recommendations.

External Audit: Audit for certain organizations are formed on the basis of a statute or Law. Such Audits are called External Audit or Statutory Audit. It is called external because it is carried out by a qualified external Auditor.

Example: Audit of a Joint Stock Company.

Generally rules and regulations for conducting audit, the appointment, powers, duties and responsibilities of the Auditor are given under the respective Acts. The duties of the Auditor cannot be restricted by the share holders or the Directors.

Difference between Internal Audit and External Audit

1. **Appointment of Auditor:** In case of Internal Audit, the Auditor is appointed by management, whereas under External audit the Auditor is appointed by the shareholders.
2. **Nature:** Internal audit is a staff function. Internal auditor may be an employee of the company. But External Audit is a line function. External Auditor is an outsider
3. **Qualification:** Internal auditor needs not possess the qualifications laid down under Section 226 of the Companies Act; 1956. But a statutory auditor must possess those qualifications.
4. **Major concern:** Internal auditor serves the needs of management. External Auditor Complies with the statutory requirements.
5. **Basic Functions:** Internal auditor reviews the operations and internal controls for developing improvements and ensuring compliance of policies and procedures. External Auditor expresses his opinion on the financial statements.
6. **Scope of work:** For an Internal auditor his scope of work is determined by Management, where as for the external Auditor it is determined by statute.
7. **Compulsion:** Internal audit is not compulsory but external or statutory is compulsory in case of a company.
8. **Reporting:** Internal auditor reports to the management where as an external auditor reports to the share holders in the general meeting.
9. **Span of Checking:** Internal audit involves checking of all the transactions but under the external audit test check may be applied.
10. **Removal of Auditor:** Internal auditor can be removed by the management or directors at any time but an external auditor can be removed by shareholders.
11. **Right to attend Meeting:** Internal auditor has no right to attend the meetings but a statutory auditor enjoys such right

Different Types of Audit

Auditing is a complex and detailed activity carried out for various purposes in an organization. Hence based on the objective and circumstances we can classify audits in to three broad categories. They are listed as under;

1. Classification based on Organizational structure.
2. Classification based on timing and scope of audit procedure.
3. Classification based on the specific objective behind the audit.

Types of Audit based on Organizational structure

Here the classification is based on the type of organization. That is, an organization can be government owned or private owned, it may be a company form of organization or a co-operative type of organization. Based on this nature of organization, the need for and requirement of audit also differs. Accordingly following are the various types of audit conducted by an auditor:

a. Statutory Audit

This is a compulsory audit to be carried out by all those organizations which are formed, registered and governed by some Statute. It is carried out by a qualified external auditor. It is compulsory under statute for the following organizations:

- i. *Joint Stock Companies incorporated under the Companies Act 1956:* Since there is divorce between ownership and control in this Joint stock Company, the Law requires that the business affairs of the company must be checked and its accounts need to be verified by an external auditor. This makes its financial information reliable for people to come and invest in such companies.
- ii. *Co-operative Societies registered under the co-operatives Societies Act:* These Societies are registered under Cooperative Societies Act 1912. The management of affairs of this society is handled by few elected members even though the capital is contributed by all members. This makes it compulsory for audits of accounts of this society by an external qualified auditor. This auditor conducts the

audit and submits the report to the registrar and to the members concerned for their reference and perusal.

- iii. *Banking Companies governed by the Banking Companies Act 1949.*
- iv. *Insurance Companies governed by the Insurance Act 1938.*
- v. *Public and Charitable trust registered under the various Religious and other Endowment Acts.*
- vi. *Local Authorities and government undertakings established under special Laws.*

b. Private Audit

This audit is not mandatory and it may be conducted by the organizations according to their discretion. It may be of the following types;

- i. *Audit of Sole Proprietorship:* It is a single man business. The audit is conducted according to the whims and fancies of the trader. The auditor conducts audit according to the requirement and expectations of the sole trader.
- ii. *Audit of Partnership Firm:* It is not compulsory for a partnership firm to get its accounts audited. The Auditor is appointed by the partners and he will conduct the audit keeping in view the following factors;
 - a. provisions in partnership Act 1932
 - b. Contents of partnership deed
 - c. Capital contributed by partners
 - d. Salary and commission to partners
 - e. Interest on capital to partners etc.

c. Government Audit

The government departments, offices and enterprises registered as companies need to have their accounts audited by an auditor appointed by Central government on based on the advice of comptroller and Auditor general of India.

This audit is conducted with the following objectives

1. Ensure that the financial transactions are carried out with the prior approval of concerned authorities.
2. Make sure that expenses incurred are in accordance with the allocation of funds.
3. Obtain maximum output from the minimum input
4. Ensure that the functioning of these government institutions is in the interest of the public welfare.
5. Make sure that public funds are not misappropriated.

Types of Audit based on Timings and scope of Audit procedure:

1. **Continuous Audit:** under this audit the books of accounts of the concern are verified and checked continuously throughout the year at period intervals say weekly, monthly and quarterly. This frequency of auditing depends on the desire of the management and quantum of work.

Continuous audit is necessary for the following types of organizations;

- a. Where it expected that audited accounts are to kept ready soon after the close of the accounting period
- b. Volume transaction is high and transactions are complex in nature.
- c. The prevailing system of internal control is not effective and satisfactory
- d. Final accounts are needed to be prepared on monthly basis.

Merits of conducting continuous audit

- a. Rectification of errors and frauds at an early stage
- b. Chances for committing mistakes are minimized
- c. Continuous audit acts as a moral check on the staffs of the organization
- d. Leads to increased efficiency on the part of the employees of the organization
- e. Aids in the preparation of Interim accounts
- f. Helps in the maintenance of up to date records.

Drawbacks in conducting Continuous audit

- a. It is suitable and economical only for large organizations
- b. Frequent visits of Management Auditor will be of great disturbance to the conduct of routine work of the client's staffs.
- c. Chance for auditor to develop a favourable attitude towards some employees and he may become negligent in executing his duties.
- d. Once the checking is carried out by the auditor the client's staffs may alter the figures and hence the rechecking of records becomes necessary.

2. **Internal Audit:** Under this type of Audit, the auditing is carried out by an auditor who is appointed by the Management of the organization. This audit is done with a view to appraise the functioning of various departments present within the organization. Generally a separate department called internal audit department is set up in big organizations. This department examines the various operational activities of the organization like accounting and finance. Its main aim is to identify the areas of weakness and suggest remedial actions to overcome such shortcomings. The external auditor is assisted by the internal auditor in discharging his duties efficiently.

Objectives of internal audit

- a. To check whether the rules, regulations, policies and procedures are followed in the organization or not.
- b. To find out whether the existing internal controls in the organization is adequate and suitable for the size of the organization.
- c. To assure that all assets and valuables belonging to the organization are safe against probable misuse.
- d. Spot out the weak areas of the organization and give suggestions to strengthen such areas.
- e. Check whether the functioning of the institution is smooth in all respects.

3. Interim Audit: An audit which is conducted in between two annual audits for interim purpose is called Interim Audit. It is conducted between two regular audits. It is done for the purpose of ascertaining the reliability and accuracy of financial statements of a concern in the middle of the year. For example in case the company is desires to give interim dividend to the share holders, it cannot do so unless it makes sure that the company is at the verge of earning profits. For that it needs to check the books of accounts in the middle of the year to have an idea about the profit earned up to that date. Board of directors may get the accounts audited by an independent auditor in the form of interim audit.

Benefits of conducting interim audit:

- a. Makes the completion of the final audit easy and quick.
- b. Suggestions of the auditor can be incorporated easily.
- c. Early detection and prevention of frauds and errors can be made possible.

4. Final audit or Periodic audit: Here the auditor carries out auditing only towards the end of the year. Under this type of auditing, the auditing work commences only after the preparation of final accounts. Auditor visits the client organization only once at the end of the year and carry out the entire process of auditing. It is effective only in case of small concerns with limited transactions. Large concerns will have numerous business dealings and keeping record of all transactions require frequent visits on the part of the auditor. Hence the final audit is not suitable for large scale units.

Benefits of Final audit:

- a. The auditor is able have full details before he commences the audit work.
- b. Auditing work can be done with minimum visits to the client's organization.
- c. Chance for committing errors and frauds are very rare because auditing is done only at the end of the accounting year.
- d. This type of audit is less time consuming and less expensive.

5. **Balance sheet Audit:** This audit is done with a main aim to check and verify the items appearing in the balance sheet. Balance sheet audit originated in USA. It starts with verification of items in balance sheet and works backs to the supporting evidences and related documents. It is only a partial audit because it checks only balance sheet items such as fixed assets, current assets, liabilities, reserves and surplus etc. however; the auditor will check the accounts in the general ledger and will check items of profit and loss account which are directly related to assets. This type of audit can be effective only in those organizations where the system of internal control is strong and power full.

Suitability of balance sheet Audit. This type of audit is effective and Effective only in the following situations:

- a. Presence of effective internal control system in the organization.
- b. The size of organization is big and very large volumes of transaction are carried out.
- c. Presence of Mechanized accounting system in the organization.
- d. Presence of professionally qualified staffs in the accounting and finance department.

Types of Audit based on Specific Objectives

1. **Cost Audit:** The audit of Cost accounting records is called as “Cost Audit”. In order to ensure that cost accounting plans as laid down by the management are carried properly and to check the accuracy of cost accounting records, this cost audit is conducted.

The chartered Institute of Management Accounting of UK defines it as “Verification of Cost accounts and a check on adherence to the cost accounting plan”.

From the above one can conclude that under cost auditing,

- a. Cost auditor examines whether the cost statements are properly drawn to exhibit the true and fair view of cost accounting system.
- b. That the cost accounting plans are properly implemented. In India, Cost audit was introduced under 233B in the Companies Act 1956,

with a main objective of verifying the accuracy of cost records. It also serves as an effective cost control.

2. Special Audit: The Special audit is conducted as per the order of the Central Government. According to section 223A of the companies Act 1956 the central government, may at any time, by order require the organization to conduct a special audit of its books of accounts. This may be conducted by an auditor appointed for the purpose or by the Company's statutory auditor.

The following are the circumstances in which the central government can order for the conduct of special audit:

- a. When the company does not follow sound business principles or prudent commercial practices.
- b. When the company is managed in a manner which is detrimental to the interest of trade, industry and business pattern to which it belongs.
- c. Financial position of the company is very poor and is expected to file insolvency petition any time.

3. Tax Audit: The main aim of this audit is to assist the income tax authorities to make speedy and correct assessment of tax to be paid by the organizations. The tax auditor's main responsibility is to report on all transactions that will influence the income tax liabilities of the organization. More over the Income Tax Act 1961 provides for compulsory tax audit of the books of accounts of the business entities, whose turn over exceeds 40 lakhs. A Chartered Accountant in practice can be appointed as a Tax Auditor.

4. Management Audit: Management Audit has its origin from America. It means the audit of management process and functions. It refers to an appraisal activity done, within an organization for the review of the entire departmental activities. Management Audit may appear to be synonymous with Operational Audit and Internal Audit, but there lies a difference among them. Internal Audit's aim is to find out the weak areas in the organization, its idea is to study the various activities of the

organization with a view to help management in the discharge of their duties efficiently. Operational Audit concentrates on the efficiency of operation of the various functional areas of management. Management Audit is concerned with the evaluation of management process to its entirety.

The below given are the definition of Management Audit

“Management Audit is an advice of independent specialists who have made a study of how to reach a maximum efficiency in a certain field of activity.”----- T.G.Rose

According to L.R.Howard, Management Audit is “An investigation of business from the highest level downward in order to ascertain whether sound management prevails throughout, thus facilitating the most effective relationship with the outside world and the most efficient organization and smooth running internally.”

Characteristics features of Management Audit

1. Management Audit is concerned with the process of examining and evaluating the performance of management functions
2. It appraises the policies and procedures of an organization.
3. Provides for healthy and rapid growth of the organization.
4. It is both a preventive and curative activity.
5. It is futuristic and forward looking.
6. It is result oriented and dynamic activity.
7. It is the next higher level to internal audit.

Objectives of Management Audit

1. To improve organizational efficiency
2. Guide all members of the organization to perform their duties in efficient manner.
3. Assist management in managing their affairs in a better manner
4. Make sure that objectives and mission of the organization are met.
5. Proper utilization of available resources.

6. Suggest measures to overcome lacking in the internal control.
7. Improve the overall profitability of the firm.
8. Identify the activities which are not in agreement with the firm's objectives.

Scope of work and duties of Management Auditor

The scope of Management Audit covers almost the entire functional areas of management. To quote some;

1. Finance and Accounts
2. Management information system
3. Purchasing
4. Inventory management
5. Personnel
6. Marketing
7. physical distribution
8. General administration.
9. Material management.

For want of time, all areas are not taken for investigation at a time. The functional areas of management are chosen on rotation for carrying out auditing activities.

Benefits of Management Audit

1. It helps to overcome managerial deficiencies.
2. It locates the lacking in the internal control and give ideas to overcome them.
3. Management Audit provides guidelines to all members of the organization for the efficient discharge of their duties.
4. Management Audit provides for fixing Accountability for poor performance among employees of the organization.
5. Management Audit helps in locating the reason for inefficiencies in the operation of public enterprises.
6. Management Audit helps for conservation of scarce resources and proper utilization of available resources.

7. Paves way for enhancement of operational efficiency and there by leading to enhancement of profitability of the organization.
8. Management Audit helps for the periodic appraisal of managerial cadre officers so that the decisions regarding their rewards and training needs can be easily identified.

Short comings of Management Audit

1. It is vague concept and has no material purpose.
2. Personality clashes between Management Auditor and Managers since Auditor always point out lacking in the performance of managers.
3. Employees are more concerned with keeping up to date records, rather than concentrating on the higher productivity and efficiency.

However these short comings are over weighed by the advantages that accrue from Management Audit. Hence Management Audit plays a vital role in assisting management in identifying areas of deficiencies and the probable remedial measures required to overcome such deficiencies.

Management Audit Process

The following are the activities involved in the conduct of Management Audit:

1. **Preliminary survey:** Management Audit begins with the ascertainment of objectives and goals of the firm. Auditor must study the policies, plans and the procedures followed by the management. He will also check the efficiency of the internal control system in operation. He must be aware of the standards set and level of actual performance of the organization.
2. **Collection of Data:** auditor must collect required information for the conduct of audit with the help of a structured questionnaire.
3. **Examination of documents:** Audit carries out detailed examination of relevant documents and convinces himself of the authenticity of the source of such information. If required, he verifies the original source of information for clarification of facts.

4. **Observation of work environment:** Apart from collecting information through questionnaire, the auditor also collects data by personally observing the work environment because such observation helps him to be aware of certain problems which cannot be found in records.
5. **Internal Auditor's Report:** Management Auditor's work is based on the internal auditor report. Because this report helps the Management Auditor to easily identify the problem areas where the management so far did not take any action. This also enables Management Auditor to spot out the weakness of internal control system which management is not aware previously.
6. **Physical inspection:** Management Auditor conducts the verification of some physical activities carried out in the organization to find out the in competencies so as to suggest some remedial actions to improve such areas of efficiencies.
7. **Transaction tracking:** Management Auditor selects on random basis some of the transactions of the organization to study the efficiency of the procedure from start to end.
8. **Enquiry with the employees:** In order to find out real picture of the problem Management Auditor conducts personal discussion with the concerned employees who are involved in the conduct of operation under examination.
9. **Suggestions for improvement of performance:** Finally after carrying out this detailed investigation and verification Management Auditor is in a position to provide ideas and suggestions to solve and overcome the problems. This will lead to enhancement in the productivity level of the system and employees in the organization.

Management Auditor's Report

On the conclusion of Management Audit the auditor prepares a report of his entire activities. This report brings to light the findings and suggestions of the Management Auditor. This report has no prescribed format. The Management Auditor decides content and structure of his report.

Contents of the report: Generally the auditor's report will state his opinion on the following matters;

1. Adequacy and authenticity of Internal Control system.
2. Whether the current rate of return is satisfactory as compared to previous year?
3. Whether the operating cost of this organization is as reasonable as the other organizations in the industry
4. Suitability of the available tools and equipment for getting optimum production.
5. Interpersonal relationships that exist between the employees are cordial and smooth or not.
6. The overall performance of the enterprise in satisfactory or not.

5. **Operational Audit:** This audit aims at improving the overall performance efficiency of various functional areas of management so as to provide for improvement in future business operations. The internal auditor is vested with the responsibility of carrying out this audit. Because he is well acquainted with the business operations of the organization, it is carried out with the following objectives:

- a. To evaluate the efficiency and effectiveness of the firm's operating procedures and Methods.
- b. To enhance the profit earning capacity of the organization.
- c. To give suggestions for further improvement in the required areas of operation.
- d. d. Help the organization to achieve its objectives relating to maintaining social responsibilities.

6. **Marketing Audit:** Marketing Audit is carried out to evaluate and control the marketing activities of the organization. It is popular in USA and in European Countries. In the words of Philip Kotler " A marketing Audit is a comprehensive, systematic, Independent and periodic examination of a company's or business unit's marketing environment, objectives, strategies and activities with a view to determine problem areas and opportunities and recommending a plan of action to improve the company's marketing performance".

It is clear from the above definition that marketing audit is concerned mainly with identifying the marketing problems faced by an organization and give suggestion for overcoming such problems by taking remedial actions.

Features of Marketing Audit:

- a. It is comprehensive in nature
- b. It is carried out in a systematic manner.
- c. It is carried out by an outside consultant
- d. Marketing Audit is carried out on a periodic basis.

Six major components of Marketing Audit:

1. Marketing environment audit.
2. Marketing Strategy audit.
3. Marketing organization audit.
4. Marketing system audit.
5. Marketing Productivity audit.
6. Marketing Function audit.
7. ***Environmental Audit:*** This Audit seeks to bring to light the effects of operation of the enterprise on the economy. That is both evil and good effects, the functioning of the organization has on the economy will be studied and a report of such study will be published. It originated in USA in the year 1970 as a way of testing whether a company is adhering to the environmental laws and regulations of the country.

In the words of the confederation of British Industry “Environmental Auditing is the systematic examination of the interactions between any business operation and its surroundings. This includes all emissions to air, land, water, legal constraints, and the effect on the neighbouring community, landscape and ecology, the public’s perception of the operating company in the local area”.

Objectives of Environmental Auditing:

- a. Aim is to protect the environment for future generation.
- b. To ensure whether the company is complying with all the regulatory and environmental performance standards.
- c. To carry out systematic, documented and periodic review of company's operations.
- d. To ensure conformity with the environmental assessment requirements and test the accuracy of assessment.

Environmental Audit consists of four sub audits. They are

- a. Environmental management system audit.
- b. Compliance audit.
- c. Site property audit.
- d. Environmental Assessment audit.

To conclude one can say the environmental audit aims to evaluate how for the organization is caring for the well being and good health of the environment. It seeks to make the organization more environmental sensitive.

8. Social Audit: Social audit is carried out to assess how for the organization society is oriented. The amount of weight age given to society's values and well being. It is an attempt to find out the social performance of the concern. For success of any social audit the involvement stake holders is important. The information for conducting social audit is collected through social book keeping, surveys and case studies. This collection of data and its processing is done throughout the year continuously and the net result is produced in the form of social audit report document. This report brings to light the accountability of the organization towards its stake holders. It serves as a management tool and act as a tool for promotion, marketing and advocacy purposes.

9. Human Resources Audit: HR audit reviews an organisation's policies, procedures, practices and rules governing the management of human resources in the organization.

A HR audit generally involves the following;

- a. personnel policies
- b. personnel files review
- c. Appraisal of performance
- d. Evaluation processes
- e. Termination processes
- f. Unlawful harassment complaints.
- g. Hiring and orientation procedures
- h. Benefits and compensation review
- i. Employee classification and status
- j. Job description.

Benefits of HR audit:

- a. helps the organization to identify the most needed HR Programmes to achieve its objectives
- b. Evaluate the HR departments' efficiency in executing such policies.
- c. Aim for continuous improvement
- d. Establish a close relationship between HR and Line functions of the organization.

10. Energy Audit: This audit aims to verify whether the energy resources like electricity, natural gas, fuel oil, are efficiently used in the organization. it evaluate the efficiency of all building and process system that use energy. His audit tries to identify cost and energy saving opportunities. The following are the activities included in this type of audit:

- a. Identify all energy systems.
- b. Estimate the conditions of such systems
- c. Analysis of impact of improvements on those systems.
- d. Produce energy audit report.

The energy audit can be of following types:

- a. Preliminary audit
- b. General audit
- c. Investment grade audit

To conclude, the energy audit is conducted mainly with a view to conserve energy in the organization. So that unnecessary expenditures on energy can be cut off and also prioritize the use of scarce energy resources in the organization.

Different Roles of an Auditor

An Auditor assumes different roles in an organization while he carries out the Auditing for that organization. Strictly speaking, audit of business concerns other than company is voluntary and not compulsory. Hence in case of a corporate, the Auditor is appointed in accordance with the provisions in the Companies Act 1956. According to the expectations of the statute the Auditor plays the following Roles:

1. ***Agent of the Members:*** In a company the auditor is appointed by the share holders and his main duty is to safeguard their interest. Auditor carries out auditing and submits the audit reports to the share holders. Hence agent-Principal relationship exists between the auditor and share holders.
2. ***Officer of the company:*** Generally, an auditor is not treated as a regular employee of the company excepting under certain circumstances mentioned in the provisions of the Companies Act 1956.
3. ***Auditor is not an Advisor:*** Auditor is only entrusted with the responsibility of checking the correctness of books of accounts maintained by the company and to see whether they reflect true and fair view of affairs of the business concern. Hence he cannot act as an advisor to the Directors of the company or to the share holders. He is not concerned with the policies of the company.
4. ***Auditor is not a Guarantor or an insurer:*** Auditor simply checks the accuracy and correctness of the books of accounts and gives a report. He does not guarantee that books of the company depict

true position of the company. He only certifies to the share holders on the true financial position of the firm.

5. ***Auditor is not a critic of Management Decision:*** Auditor does not carry out a critical analysis of the policies and decision made by management. Rather he only carries out a verification of the books maintained.
6. ***Auditor is a Watch Dog and not a Blood Haunt:*** Auditor only carries out a checking and he does that without being suspicious over everything. He is not a detective. He is watchful over detection and prevention of fraud.
7. ***Auditor is not a Detective:*** An auditor cannot be made responsible if he is not able to detect cleverly planned and committed frauds. Because he relays on the probity of the employees of the company who enjoys a position of trust and confidence in the organization.

Lesson 2.2 - Management Control Process

Control process consists in verifying whether everything occurs in conformity with the plans adopted, the instructions issued and principles established. Its main objective is to point out weaknesses and mistakes and give suggestions for corrective measures and thus their reoccurrence. Thus the control process involves a comparison of actual with the expected and locates the deviations, if any.

Management control process aims to bring to light that everything is taking place in accordance with the plan and thus it compels events to conform to plan. One can say control is forward looking since it aims to locate any deviation from the plan with a view to incorporate corrective action.

Features of Control Process

1. **A Management Function:** this control is performed by managers in order to confirm that everything is taking place in conformity with the plan
2. **Dynamic Process:** When ever plans are implemented, the control process becomes imperative to check if there is any deviation.
3. **Continuous Activity:** It is a continuous process. Management continuously reviews its actions so as to confirm their performance is in the right track. This helps to avoid wastage of resources.
4. **Control is forward looking:** control is futuristic. It is future oriented. One cannot control which relates to past or what had already happened. It keeps check on the performance that is currently carried out or going to be carried out in near future.
5. **Control closely related to planning:** It is rightly said that “There can be a planning without controlling but there cannot be a controlling without planning”. This is so because, it is the plan or the budget against which the actual performance can be compared to arrive at deviations if any.

Steps in Management Control Process

The management control process contains the following basic steps. The manager first of all establishes performance standards which can be used as a yard stick to measure and compare the actual with the standards. The end result of comparison is the spotting out deviations. Then corrective actions are designed to correct errors and also avoid their reoccurrence. Generally, the steps involved in the management control process are listed below:

1. Establish Standards
2. Measuring Actual Performance
3. Comparison of Actual with the Standard
4. Taking Corrective Actions.

The Above Listed Steps are Briefly Explained Below

Establish Standards: The standards are the yard sticks using which the actual can be verified. The standards are the expected out comes. The set standards should be simple and easily understood by the workers so that they have a clear idea of what is expected from them in terms performance. The standards set should be precise, attainable, accurate, flexible and realistic.

Measuring Actual Performance: In this stage the actual performance is measured and compared with that of the set standards. This process of measuring is easy if the standards are set in quantitative terms. However in certain cases setting quantitative standards is not possible, hence manager sets standards in qualitative terms.

Comparison of Actual with the Standard: under this step the actual performance is compared with the standards. This is said to be the heart of control process. Because, this step brings to light whether the performance is taking place in accordance to the plan or not. For example the supervisor in the production department compares the actual output with that of the scheduled one, then he is said to carry out the control process for his production department.

Taking Corrective Actions: The last step in the control process is taking corrective action, in case any deviation is identified. Deviation means difference between the standard and the actual. If the deviation is found to be insignificant then immediate correction may not be required only its reoccurrence can be checked. On the other hand if the deviation is significant and serious the management must take corrective action immediately and give suggestions for controlling its reoccurrence.

Follow-up: It is the responsibility of the management to see whether all the suggested recommendations are properly implemented and followed. In some organizations the control process has become ineffective because of failure on the part of management to check the follow-up actions.

Essentials of a Good Management Control Process

The management control process to be effective should possess the following characteristic features:

1. **Suitability:** The control system followed by the management should be suitable for the type of activity to which it is applied.
2. **Comprehensible:** The control system followed must be easily understandable by all in the organization. Especially by those, who are going to use it.
3. **Economical:** The control system should be cost effective. It must not be a costly system which is beyond the means of the organization. With less expenditure the control system must bring more benefit to the organization.
4. **Flexibility:** The control system followed by the management should be flexible enough to give room for changes.
5. **Less time consuming:** The control process must consume less time and produce results expeditiously. Because the aim of the control system is to check deviation in the near future.
6. **Forward looking:** The control system should be futuristic. Because one cannot control what has happened already in the past.
7. **Objectivity:** The standards set are objective in nature rather than

- being subjective. This helps to avoid bias in appraisal of performance.
8. Conformity to organizational structure: To avoid confusion the responsibility of people in the organization in carrying out the control process should be clearly demarcated for this purpose control should conform to organizational pattern of the concern.
 9. Indicate critical points: An efficient control system must not only high light the deviations but also pin point the critical areas of management.
 10. Suggest corrective actions: A good control system not only focus on deviations but also give suggestions about the corrective actions needed to be taken.

Lesson 2.3 - Budgetary Control and Analysis of Variance

Budget is a detailed plan of operations for some specific future period. It is an estimate prepared in advance of the period to which it applies. It acts as a business barometer as it is a complete programme of activities of the business for the period covered. According to Gordon and Shilling law budget may be defined as “a predetermined detailed plan of action developed and distributed as a guide to current operations and as a partial basis for the subsequent evaluation of performance”

Meaning of control: control means “some sort of systematic effort to compare current performance to a predetermined plan or objective, presumably in order to take any remedial action required”

Management control process involves two separate but closely related activities. Namely planning and controlling. Planning means deciding what is to be done and how it is to be done. Control is assuring that desired results are attained. Budget is simply a plan of action hence the technique of budgetary control is an important tool of management control.

Meaning of budgetary control: Budgetary control refers to the principles, Procedures and Practice of achieving given objectives through budgets and budget reports. “It is the system of management control and accounting in which all operations are forecasted and so far as possible planned ahead, and the actual results compared with the forecasted and planned ones.

Budgetary control is an essential tool of management for controlling cost and maximizing profits. It may be conceived as one of the supreme examples of rationality in management. It is a useful management tool for comparing the current performance with pre-planned performance with a view to attain equilibrium between ends and means, output and effort. It corrects the deviation from pre-planned path through the media

of observation, research planning, control and decision making and thus helps performance of future activities in an orderly way. It uncovers uneconomies in operations, weakness in the organization structure and minimizes wasteful spending.

Budgetary control involves the following “

1. Establishment of budgets
2. Continuous comparison of actual with Budget for achievement of budgeted figures.
3. Revision of Budgets in the light of changed circumstances.

Administration of Budgetary control

In a large –sized organization the process of Budgetary control System can be organized in the following lines:

1. ***Determination of Objectives:*** A budget being a plan for the achievement of objectives, it is desirable that same are defined very precisely. The objectives should be written out and the areas of control should be clearly demarcated in order to give clear understanding of the plan and its scope to all those who must cooperate to make it a success.
2. ***Establishment of Budget centre:*** A budget centre is a section of the organization of an undertaking defined for the purpose of budgetary control. A budget is prepared for each centre and therefore the budget centre should be properly selected. A budget centre may again consist of a number of cost centre representing different groups of machines.
3. ***Introduction of adequate accounting records and their codification:*** The accounts department gives data required by the budget department and with the help of it the budget department can make estimates.
4. ***Preparation of budget organization chart:*** Organization chart is a map that depicts the functions and responsibilities of each member of the management and ensures that each one knows his position in the organization and his relationship to other members. It should be supported by written directives concerning the function of the

staff members. The organization chart depends up on the nature and size of the enterprise.

5. **Establishment of Budget Committee:** In a small business, the Cost Accountant is responsible for the preparation of budget, but in large undertaking, a budget committee is appointed for this purpose. The budget committee consists of chief executive or Managing Director, Budget Officer or Director or Controller and Heads of main departments. The chief executive acts as the Chairman and Cost Accountant as its Secretary. The managers of different departments prepare the budget and submit to this committee. The committee makes necessary adjustments, coordinates all the budgets and prepares a Master Budget.
6. **Preparation of Budget Manual:** It's a document or Schedule or Rule Book which sets out the responsibilities of the persons engaged in the preparation routine of forms and records required for budgetary control. This manual lays down the budget programme, specific and general duties of the executives, departmental managers and the budget committee.
7. **Level of activity:** It is essential to establish a normal level of activity since it forms the basis of the budget. Level of activity can be attained by efficient working under the existing condition.
8. **Selection of the Budget period:** The period covered by a budget is known as budget period. The length of the budget period normally depends up on the nature of the plan, circumstances of the business, the control aspect, production period and timings of availability of finance. Most manufacturing concerns use one year as the budget period. For control purposes, the annual totals are divided by 12 to obtain monthly budgets.
9. **Locating the Principle Budget Factor:** Budget should be evolved around the principle budget factors in business. Every business has its own key factors, which limits the level of activities. These Key factors should be correctly identified and diagnosed. In most of the enterprises, sales (Demand) are normally the key factor. The success of the budgetary control rests on the accuracy of the sales forecast. If the sales figure proves to be in accurate, most of the budget will be affected. Similarly, materials, labour, cash, space, equipment, management etc may also be the key factors.

10. **Determination of Budget Cost Allowance:** It is the cost which a budget centre is expected to incur during a given period of time in relation to the level of activity attained by the budget centre.
11. **Implementation of the Budget and recording of actual performance:** a copy of the section of the master budget appropriate to each department sphere of activity is issued to the respective heads for execution.
12. **Budget Variance Analysis and Reporting:** A variance is the divergence between any planned result and the actual result measured in monetary terms. A budget variance is the difference between a budgeted figure and an actual figure. The overall variance between a planned cost and an actual cost is usually due to a number of factors. Ascertaining the contribution of each factor to the overall variance is known as variance analysis.

Elements of a Successful Budgetary Control System

The success of the budgeting process in an organization depends up on the following essential elements:

1. **Objectives:** All planning requires that objectives have been established since the plan is merely a means to an end, not an end in itself. The objectives are the end.
2. **Knowledge of Cost Behaviour:** understanding of the cost pattern of the firm is essential and the Cost-volume –profit Analysis is a useful tool to the budgeting exercise because it aids in the understanding cost behaviour.
3. **Accurate Forecasting of Business Activities:** Forecasting is a prerequisite in budgeting process. It is not only the starting point but is also critical to the development of an accurate budget. Forecasting can be done regarding activities which are internal and external to an organization. Business firms require competent market researchers to forecast accurately the external factors.
4. **Coordinating Business Activities:** budgeting coordinates all individual budgets in to an integrated plan as each budget has certain implications for the other budgets. There must be coordination between sales, production, purchasing, and personnel budgets.

Budgets are useful in communicating budgetary expectations and goals and in bringing necessary adjustments in organizational activities.

5. **Education:** All levels of Management must be educated on the usefulness of the budget and must be taught the part that each must play in planning and control through budgets. This necessitates a continuous training in budgeting methods.
6. **Communicating the Budget:** The success of comprehensive budgeting programme depends on communication of individual budgets to the different units in the organization. The preparation of budget is of no use unless it is made known to the persons for whom it is made.
7. **Acceptance and cooperation:** successful budgeting also requires that budget should be accepted by the people who must execute them. Budgeting should have the active cooperation of the entire organization.
8. **Reasonable Flexibility:** The budgeting programme should contain reasonable flexibility. It should also be remembered that too much flexibility and too much rigidity are both undesirable. Because too much flexibility will weaken the cost control and the budget will become inoperative. Similarly too much rigidity not permitting reasonable deviations will create problems and restrictions in the implementation of the budget.
9. **Adequate Systems Support:** This will come mainly from the accounting, where it must be ensured that records and procedures are sufficient for the task in hand. Thus the budget should be linked to the accounting system in such a way that the same definition, etc relate to common elements.
10. **Providing a frame work for Evaluation:** Budgeting provides a basis to evaluate the performance of different departments. A budget, properly developed, will contain initially organizational goals and expectations and subsequently can be used as an effective evaluation technique.

Budget and its Types

Budgets are an important tool for effective short term planning and control in organizations. An operational budget usually covers one year and states the revenues and expenses planned for that year. It has these characteristics:

1. It estimates the profit potential of the business unit.
2. It is stated in monetary terms, although the monetary amounts may be backed up by non monetary amounts (e.g. Units sold or produced)
3. It generally covers a period of one year.
4. It is a management commitment; managers agree to accept responsibility for attaining the budgeted activities.
5. The budget proposal is reviewed and approved by an authority higher than the one who prepares the budget.
6. Once approved, the budget can be changed only under specified conditions.
7. Periodically, actual financial performance is compared to budget, and variances are analyzed and explained.

Flexible Budget

A Flexible Budget is a dynamic budget which is designed to change in accordance with the level of activity. It is also called as variable budget or Sliding scale budget. A budget prepared in a manner so as to give the budgeted cost for any level of activity is known as Flexible Budget. A flexible Budget recognizes the difference in behaviour between fixed and variable expenses in relation to fluctuations in sales or production and changes according to the change in the level of activity. When flexible budget is used budgeted expense are adjusted to the actual activity level before comparing with actual expenses incurred.

The main idea behind the preparation of flexible budget is that for any given volume of business there should be some type of expenditures and that type should be known well in advance to provide assistance for doing the actual expenditures. From the Control point of view, flexible

budget is very effective in those business units where frequent changes occur in activities due to market fluctuations, seasonal variations etc.

There are two ways using which flexible budget can be prepared they are (a) Formula Method. (b) Multi activity or Tabular Method. Generally following steps are followed in the preparation of flexible budget:

1. Decide the range of activity to develop a flexible budget.
2. Determine the cost behaviour- fixed, variable and semi variable to each element of cost.
3. Select the activity level (generally in terms of output).
4. Prepare a budget at each activity level.

Benefits of preparing Flexible Budget

1. Ascertainment of Cost with greater degree of accuracy.
2. Control over Cost is made possible because it shows what amount of cost must have been incurred for each level of activity.
3. Management by Exception is possible because only deviations of significant type are taken up to the top management for solution purpose and for taking remedial actions.
4. Achievement of best results with maximum return is possible because a careful watch is kept on the production, sales, and inventory levels.

Zero Base Budgets

Generally while constructing a functional budget, the previous year's budget figures will be taken as the base. This is so because previous year's figures are adjusted for the impact of inflation and for the proposed increase or decrease in the level of activity of the business then are used in the construction of budget for the current year. This practice brings in the inefficiencies of the previous year to the current year hence to streamline the allocation of funds and to control cost a new technique called Zero Base Budgeting came in to existence.

The “Zero-base” means a “nil budget” as the starting point. There is no given base figure for a budget. ZBB originated in USA. A fresh budgeted figure is determined keeping in view the circumstances and the requirements. The basic concept of ZBB is “Starting from Scratch” that is every activity in an organization must be examined and justified, giving consideration to the alternatives and the results are obtained.

Basic Principles underlying the preparation of ZBB

1. Every budget starts with a Zero base
2. No previous year figure need to be taken as base for adjustments.
3. Fresh examination of each activity
4. Justification of every allocation in the light of anticipated circumstances.
5. Give due consideration to alternatives.

Benefits of ZBB

1. Makes planning and controlling activities in an organization more effective and efficient.
2. Higher degree of Coordination can be achieved at all levels of activities.
3. Operating efficiency of the firm is greater because responsibility and accountability can be easily pinpointed.
4. Efficient allocation and optimum utilization of available resources.
5. Better interpersonal relationship is developed among employees.

Thus ZBB is a Planning, resources allocation and Control tool. According to ZBB system, justification of the expenditure may be required on the basis of the required output. So while ZBB may be applicable to only a portion of the budgeting effort in an organization, those areas to which it is directly applicable are the hardest to plan and control.

Master Budget

The Master budget is the summary budget incorporating all the functional budgets of the firm. Master budget is prepared in the form of an

Income statement, starting with Sales Revenue, followed by cost of sales, operating income, non-operating expenses and other income reaching profit before tax and interest and there after arriving at net profit after deducting financial charges and income tax. Master budget requires the approval of Budget Committee to put it in to operation.

Performance Budgeting

Budgeting is a technique which expresses in financial terms the management's operation and financing the organization for a specific period of time. It is an effective technique that provides for performance appraisal followed by follow-up measures. Performance budgeting aims at evaluation of performance of the enterprise keeping in view the specific and overall objective of the organization. Its main focus is on the contribution of each employee for the attainment of organizational objective in general and short term business objectives in particular. It provides a concrete direction to each employee and acts as a control mechanism to top management.

The National Institute of Bank Management define the Performance budgeting as "The process of Analyzing, identifying, simplifying and crystallizing specific performance objectives of a job to be achieved over a period in the frame work of organizational objectives, the purpose and the objective of the job". The technique is characterized by its specific direction towards the business objectives of the organization. Performance budgeting lay emphasis on achievement of specific goals and in the long run it aims at continuous growth so that the organization can be sensitive, adoptive and avoid rigidities which may hinder its growth.

Performance budgeting involves preparation of performance report. These reports are prepared by comparing the budget with the actual data and reveal the variance. These reports are prepared using the data provided by the accounting system. The head of the each department is vested with the responsibility of preparing Performance budgets. He will do so using the copy of section of the master budget. The periodical reports will be given to the departmental heads that will prepare a summary of all the sectional budgets and give this to budget committee. The purpose of this report is to inform promptly about the deviations in actual and budgeted activity so that the person in charge will take needed actions to correct the deviations.

Analysis of Variance

Variance Analysis

The main aim of any control process is to identify the variation between the actual performance and the standard fixed. In case any deviation is identified between the actual and the standard then it calls for analysis of such variation in order to find the cause for such variation and to suggest some measures for remedial action. Hence variance analysis is a process of analyzing variance by fragmenting the total variance in to smaller identity so that the responsibility for such variance can be pin pointed easily. If the actual is less than the expected then the variance is said to be Favourable and if the actual is more than the expected, then it is called as unfavourable variance. For example if the actual cost exceeds the standard, then it is unfavourable variance, and vice versa. A variance can be either Price variance or volume variance. Different management personnel are entrusted with the responsibility of carrying out variance analysis. During the course of analysis if any individual is identified as responsible for such variance, then it is called Controllable Variance. But in some cases the variation might have occurred due to factors beyond the control of an individual, then it is called as uncontrollable variance.

In order to minimize the occurrence of variance the management must be cautious in the following aspects:

1. Fix a reliable Standard.
2. Provide for incidental expenses.
3. Consider change in the Market situation.
4. Provide allowances for possible loss of material, machine hour, labour hour etc.
5. Consider changes in Managerial policies.

To be successful in carrying out variance analysis, the management must carry out promptly and quickly the corrective actions. For this the management must be given a report of analysis, giving causes for such variation in particular along with the comments on overall performance in general.

Lesson 2.4 - Marketing and Distribution Control

Marketing being an important functional area of Management requires a control system which will monitor the marketing process so as to ensure effective implementation of marketing plans of the organization. Marketing control is a process in which management generates information on marketing performance of the business concern.

Two major forms of control are (a) control over efficient allocation of marketing effort. (b) Secondly, comparison of planned performance and actual performance. In the two forms first one, marketer may use past data as a standard against which to evaluate future marketing expenditure. In case of second one, management is reminded of the remedial actions needed to be taken for performance discrepancies.

Type of Control	Responsibility	Purpose of control	Tools used
Strategic control	Top Management	To check if the organization is utilizing its opportunities with respect to markets, products, and channels	Marketing Audit
Annual plan control	Top and Middle Management	To find out if the planned results are being achieved	Sales analysis, Attitude ranking, Market share Analysis, expenses to sales ratio.
Efficiency and effectiveness control	Middle Management	To examine the optimum utilization of available resources in the attainment of marketing strategies and goals.	Expenses Ratio, Advertising effectiveness measures, Market potential, Contribution margin analysis.

Profitability	Marketing controller	Find whether the company is making profit or not	Profitability by product, Market segment, trade channel, order size
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Levels of Marketing Control

(Adopted from Philip Kotler, Marketing Management: The Millennium Edition PHL, 2000)

The above given tables gives a clear picture of four types of control required for managing the marketing activities in an organization.

Marketing control process is carried out in two phases. They are control to check efficient allocation of marketing effort and checking the differences between the planned performance and actual performance. However control on marketing activities can be exercised at level of marketing.

Strategic Control

Here the aim is to check whether the strategy framed for the marketing activities are duly followed and implemented and the expected results are attained. Hence it is expected on the part of a prudent business man to conduct the Marketing Audit periodically so as to make a periodic, comprehensive, and systematic evaluation of the organization's marketing operations that specifically analyses the marketing environment and business concerns internal marketing activities.

Thus Strategic control helps the firms to understand the change in the marketing scenario for the firm and help to avoid product failure and to tap the market potential for the firm's product.

Annual Plan Control

Plan acts as the standard against which the firm's actual performance can be compared to arrive at the deviations, if any. Sales volume, Profit earned and Market share are the quantitative standards which help to measure the firms marketing performance. Hence a business concern may use the following tools to check on plan performance.

1. Sales Analysis
2. Market share analysis
3. Marketing expenses –to- sales ratio
4. Financial analysis
5. Market based score card analysis

Efficiency and Effectiveness Control

Under this control system effort is taken to check whether the resources like sales force Advertising are used efficiently. Whereas the effectiveness control evaluates the capacity of strategic components to accomplish the objectives. To check whether the market potential is tap or not, the firm can evaluate the effectiveness of Distribution channel, Channel Members and the product.

Profitability Control

The main aim of this part of Marketing Control is to find out which segment of the business is earning profit for the firm and which the money loser is. Here the term segment means the unit taken up for analysis. This unit may be a customer segment, Product Line, Territories; Channel Structure this study helps the firm to make budget allocations on the basis of the profitability and market potential.

Thus an effective Marketing Control system has four distinct factors such as Strategic control, Strategic control, Efficiency and effectiveness control and Profitability Control. A company's marketing effectiveness is reflected in the degree to which it exhibits the five major attributes of a marketing orientation such as Customer Philosophy, Integrated Marketing organization, Adequate Marketing Information, Strategic Orientation, and Operational efficiency.

Distribution Control

The very purpose of manufacturing an item is to make it reach the ultimate customer on time; this aim is fulfilled by the efficient distribution system adopted by the manufacturer. A prudent manufacturer adopts a channel of distribution which is cost effective. Generally distribution system

consist of the activities like, Transportation, Ware housing, packaging, Inventory control, and material handling. Distribution control's aim is to minimize the cost involved in carrying out these activities.

The manager in charge of distribution activities is also responsible for preparing the budget for distribution expenses. So he must be provided with the past cost data relating to distribution expenses. This will help him to estimate the future cost related to distribution expenses. The distribution system's cost structure can be framed in to an equation, as illustrated below,

$$D = T + FW + VW + S$$

Where

D = Total distribution cost

T = Total Transportation cost.

FW = Fixed Ware housing cost.

VW = Variable ware housing cost (including inventory cost)

S = Cost of lost sales due to average delivery delay.

Profit contribution of each channel of distribution is found out to identify the effective channel of distribution. At all juncture effectiveness of cost control measures must monitored so as to ensure best results from the efforts taken for both marketing and distribution control.

Summary

Auditing is an important tool of management Control. It checks the authenticity of books of accounts of a business concern. An Audit is an examination of accounting records of a business concern, done with a view to check whether correctly and truly they reflect the transactions to which they purport to relate. The objectives for carrying out Auditing can be discussed under three heads. They are: Primary objectives, Secondary objectives, Specific objectives. Internal Check is important for successful Audit in an organization. Internal Check ensures that the assets of the concern are intact and the policies of the management are followed promptly. Internal Audit on the other hand involves continuous review of

all the operations of the firm to ensure the management that all activities are carried out in an efficient manner.

Whereas External Audit is done by the qualified external Auditor, appointed by the share holders. An organization needs to carry out different types of Audits like Management Audit, Marketing Audit, social Audit, Energy Audit Etc. depending up on its requirement and necessity. The Auditor Who carries out different types of Audit has different types of duties and responsibilities depending up on the type of the Audit. However for a company Auditor the power, duty and responsibilities are stated in the Statute.

The second major tool of management control is Budgeting. Budgeting helps management to have financial control over the various activities related to finance in an organization. Budget is a detailed plan of operations for some specific future period. It is an estimate prepared in advance of the period to which it applies. It acts as a business barometer as it is a complete programme of activities of the business for the period covered. Budgetary control refers to the principles, Procedures and Practice of achieving given objectives through budgets and budget reports. Budgets are of different type. To control different Functions of Management different Budgets are prepared. Production budget, ZBB, Flexible and Fixed budgets, Performance budgets are prepared to exercise control over various activities.

Management control process involves comparing the actual performance with the standard. The result of the control process will be location of deviations in the performance, if any. Then there arises a need to carry out Variance Analysis, which will help the management to understand the reason for the occurrence of such deviations and this will pave way for framing corrective actions.

Self Assessment Questions

1. State the meaning and objectives of Auditing.
2. What is Internal Control? Explain its objectives?
3. What are the requisites of a good internal control system?
4. Explain the tools used to evaluate internal control.
5. Distinguish between Internal Audit and External Audit?
6. What is Management Control Process?
7. Enumerate the steps involved in the management control Process?
8. What is budgetary control system?
9. How will you administer a budgetary control system in an organization?
10. What are the essentials of a successful budgetary system?
11. What are the various types of budgets?
12. Write a note on Performance Budgeting.
13. What is Management Audit?
14. How can the control on marketing activities of a firm be exercised?
15. Explain the role of an Auditor in carrying out Audit procedure for an Organization?
16. "Auditor is only a watch Dog and not a Blood Haunt"- Explain?

CASE STUDY

Veera Corporation was a diversified company operation in a number of niche markets that were largely independent of each other, that is customer buying decisions in each of these markets were made independently. The company's primary basis for competitive advantage in each of these markets was to be the first mover (and leader) in product innovation. The company faces following customer/production situations.

Case A: The customer was mainly performance sensitive rather than price sensitive. Also, there was little production Synergy across the various product lines.

Case B: The customer was mainly performance sensitive rather than price sensitive. However, there was a considerable production synergy across the various product lines.

Case C: The customer was equally sensitive regarding product performance and price. However, there was little production synergy across the various product lines.

Case D: The customer was equally sensitive regarding product performance and price. However, there was a considerable production synergy across the various product lines.

In each case, how should Veera corporation be organized and controlled ?

UNIT - III

Learning Objectives

After Studying this Unit you should be able to:-

- Understand the Concept and Factors of Responsibility Accounting for Management Control
- Explain Various Types of Responsibility Centres
- Understand the Concept, Essentials, Cost Drivers and the Model of Activity Based Costing.
- Differentiate Between Traditional and ABC Costing Technique.
- Understand the Concept, Objectives, Importance, Various Types and Merits & Demerits of Transfer Pricing
- Explain the Considerations of Various Aspects While Fixing the Transfer Pricing and the Description of Issues Related to Transfer Pricing
- Understand the Concept and Usage of Cost-volume-profit (CVP) Analysis and BEP

Unit Structure

Lesson 3.1 - Accountability in Organizations – Responsibility Accounting

Lesson 3.2 - ABC Costing

Lesson 3.3 - Transfer Pricing

Lesson 3.4 - CVP Analysis

Lesson 3.1 - Accountability in Organizations – Responsibility Accounting

Introduction

In order to achieve the goal, every organization must establish a good control system. The control system should be framed in the mode of responsibility in respect of all activities, for that each divisional or activity managers are entrusted the authorities according to the organizational structure based on their level and create accountability on their activities. This accountability measures the performance of each activity by the management and it creates spontaneous responsibility to the all persons in the organization. In this chapter we can study elaborately about the responsibility accounting.

A key managerial responsibility is for the management of resources

The nature of resources that a manager will be responsible for, it includes that the:-

- People - directing the activities and looking after people
- Financial - using financial resources in the best possible way for the organisation in line with profit and sales targets.
- Materials - making sure that materials are used in the most productive way with the minimum waste
- Machinery and equipment - using the most appropriate machinery and equipment, and making sure that it is maintained, replaced and updated where necessary
- Time - ensuring efficient use of time
- Buildings - making sure that premises are safe and are being used in the best possible way
- Information - making sure that the organisation uses the most effective information processing technologies.

Definition of Accountability

Accountability is the acknowledgment and assumption of responsibility for actions, products decisions, and policies including the administration, governance and implementation within the scope of the role or employment position and encompassing the obligation to report explain and be answerable for resulting consequences.

Product costing Vs Accountability

Product cost is the summation of direct materials, direct labor, and factory overhead. Accountability represents only the cost which is incurred and directly responsible by the divisions or departments. Both are relevant in incurring cost of the product, the accountability creates the responsibility to the each divisions in respect of cost incurred by them. The product cost is divided into various segments based on the division's responsibility when establishing accountability. You can understand the difference in the following example:-

Departments	A	B	Total
Direct Cost	20	30	50
Overheads in departmental control	10	6	16
Overheads not in departmental control	20	24	44
Total	50	60	110

Product Cost & Responsibility Cost

Costs for accountability are ₹ 30 for Dept A and B ₹ 36 for Dept. B and ₹ 44 for the central unit. The product costing of the product here is ₹ 110.

Thus the product costing is not deviated from the accountability whereas it is intertwined with it. Therefore, the good Costing system generates the information for the needs of product costing and Responsibility costing.

The Accountability and Responsibility is one and the same concept. This lesson elaborately explains how to build the responsibility in an organization in the accounting perspective.

Definition of Responsibility Accounting

C.I.M.A., London, defines responsibility accounting as “a system of management accounting under which accountability is established according to the responsibility delegated to various levels of management and management information and reporting system instituted to give adequate feed-back in terms of the delegated responsibility.”

Concept of Responsibility Accounting

1. Responsibility Accounting is a collection, summarization, and reporting of financial information about various decision centers (responsibility centers) throughout an organization; also called activity accounting or profitability accounting.
2. It traces costs, revenues, or profits to the individual managers who are primarily responsible for making decisions about the costs, revenues, or profits in question and taking action about them.
3. Responsibility accounting is appropriate where top management has delegated authority to make decisions. The idea behind responsibility accounting is that each manager's performance should be judged by how well he or she manages those items under his or her control.

Factors of Responsibility Accounting for Management Control

1. Planning

The entire activities of the organization must be well planned based on responsibility. The effective planning has to prepare with the consultation of the respective person of those who held responsibility.

2. Fixing standards

For the execution of plan, the management must fix the standards, set up budgets and estimate the actual. The targets must be very clear and precise and it should be very realistic.

3. Allocation of resources

After fixing the standards, the management has to allocate the resources while executing the plan for action and also it has to give necessary direction for such execution to the staff. The training must provide to the staffs whenever they required for execution.

4. Evaluation of Performance

The actual performance of each responsibility centre must evaluate, compare the actual with standards and find the variances. The positive motivation should be provided to the persons showing performance of favourable variance.

5. Analyse the variances

The corrective measures should be taken when there are any negative deviations. A leader's job is to ensure every member of the team wins, and winning is defined as meeting the organization's top objectives. One of the best ways I've found to help people win is to establish an accountability-based culture focused on producing results, not activities. Here is the seven-step formula you can use to create accountability and achieve extraordinary results in any organization:

Steps to Increase Accountability in any Organization

STEP 1: Establish the organization's top three objectives. This means the significant few, not the important many. Once identified, objectives must be clear, concise, measurable and obtainable.

STEP 2: Assign each team member his or her respective objectives. They must allow the organization to achieve its top objectives when coordinating the activities.

STEP 3: Identify the problems or hindrances of team members to accomplish the objective. The team leader or manager must help people to win by removing the obstacles.

STEP 4: Establish the individual responsibility to its team members by way of delegating the authority.

STEP 5: Follow up. Make schedule for monthly report to update the results. Mark the results which are completed and compare with budgeted by using green shade. The uncompleted task must be underlined with red mark and find the way to achieve.

STEP 6: Share lessons learned. Hold quarterly meetings with all direct reports present to discuss lessons learned identify critical barriers and make specific offers to help any team member behind plan. The leader wins when everyone on the team wins.

STEP 7: Reward results. Reward is essential and unequal when objectives are achieved by the team members. Those who achieve the most get rewarded the most– and everyone ought to know that.

The Effective communication is a tool of control system which drives results. The team leader has to ask their members about the status of the work and he must explain the purpose i.e., how and why it is important to achieve the goal of organization. Moreover, the team leader must know the requirements in order to complete the task. This approach removes excuses, reduces rework and is a great way to build relationships. It's also a great way to develop future leaders by increasing responsibility and encouraging decision making and creativity. By holding others accountable, the team leader is teaching them to accept responsibility. The commitment is best way to build trust and improve the results.

Responsibility centers



Management Control Structure

The organizations are decentralized or segmented into various parts for controlling the entire organization which is headed by a manager having direct responsibility for its performance. These parts or segments

are referred to as responsibility centers that include: 1) Expense centers, 2) Revenue centers, 3) profit centers and 4) investment centers.

Responsibility Accounting for Divisional Performance

This approach allows responsibility to be assigned to the segment managers that have the greatest amount of influence over the key elements to be managed. These elements include costs for a cost center (a segment that generates costs, but no revenue), revenue for a revenue center (a segment that mainly generates revenue with relatively little costs), a measure of profitability for a profit center (a segment that generates both revenue and costs) and return on investment (ROI) for an investment center (a segment such as a division of a company where the manager controls the acquisition and utilization of assets, as well as revenue and costs).

I. Expense Centers

The responsibility of the cost or expense centre is only the cost incurred by the unit or divisions. The division manager is responsible for the entire process of cost control in their respective units. The process includes estimation of cost, evaluation of performance, and comparison of actual with budgeted. Thus the manager of a cost centre is responsible for controlling the cost and he must take measures for the uncontrollable cost.

There is various classification of expense or cost centre, such as:-

- Engineered Expenses centre
- Discretionary Expenses Centre
- Administrative and Support Centers
- R & D centers
- Marketing Centers

1. a. Engineered Expenses centre

This type of centre is applicable in manufacturing, warehousing, distribution and trucking. Here the inputs are measured in terms of money value but the output is measured in units. Moreover, the centre

is responsible in respect of quality of output and employees training and development.

1.b. Discretionary Expenses centre

The administration and developmental activities of the product developments are covered in this type of centre. e.g.

- Research & Developmental Expenditure,
- Marketing activities of capturing the market of the product,
- The customer service and
- Financial planning.

1. c. Administrative and Support centers

It provides services to other responsibility centers, so it is difficult to evaluate and quantify the contribution of the services of the staffs. The manager of this unit can prepare budget to control the expenditure.

1.d. R & D centers

In the modern world, the technology is changing every day. So, every organization must develop their product based on the changing technology, for that they have to spend lot of money and time on Research and development. The cost controlling system is very difficult in this unit. This is because of heavy expenditure incurred for the experiment while developing a new technology, innovate a new product and improving the old product, it is very difficult to quantify the results.

1. e. Marketing Centers

The activities are related to obtaining orders which includes advertising, sales promotion, and training sales force. The evaluation in terms of sales is very difficult for this centre. This is because these activities are long term perception.

II. Revenue Centre

A revenue centre is responsible for selling products and services and the responsibility is decentralized into various divisions on the basis of geographical area.

III. Profit Centre

Profit centre is applicable to all divisions in the organization. This is because of the overall organization goal is striving to attain the maximum profit. It is evaluated in terms quantum of profit for which revenues are harmonized with expenses related to the organization as whole and the responsibility may decentralize into various divisions on the basis of product or divisions or territory etc.,

For example: Transfer pricing

Transfer pricing is the notional price which is used while transferring goods from one division to another. This method is applicable in the process industry because output of one process becomes the input of another process. The measurement of internal profit helps to evaluate the division's performance and internal management control. It is a tool of Management control process.

The effective profit centre system must have the following requirements:-:

- A Sound system of Transfer prices,
- Autonomy to the Divisional Manager,
- Survival of Market facilities,
- Negotiation power to the Divisional Managers,
- Uniform system of Accounting
- Arbitration to settle Disputes
- Adequate knowledge of management required to the Divisional Managers.

IV. Investment Centre:

The responsibility of this centre is based on the assets employed i.e. Return on investment and optimum utilization of the asset. In this respect all assets are considered as investment, which is directly and indirectly involved in the investment activities.

Controllability Concept

A fundamental concept of responsibility accounting is referred to as controllability. Hypothetically, a manager should only be held responsible for those aspects of performance that he or she can control. In my view, this concept is rarely, if ever, applied successfully in practice because of the system variation present in all systems. Attempts to apply the controllability concept produce responsibility reports where each layer of management is held responsible for all subordinate management layers.

Advantages of Responsibility centers:

- It is an effective tool for cost control/reduction
- It helps to Budgetary control/standard costing
- It is an aid to planning/controlling by top management
- It fixes responsibility/motivates
- It evaluates performance of managers/divisions

Advantages of Responsibility Accounting

Responsibility accounting is a traditional accounting control system; it provides an organization with a number of advantages.

- It provides a way to manage an organization unless otherwise it is unmanageable.
- It helps fixing divisional responsibilities through assigning responsibility to lower level managers that allows higher level managers to pursue other activities such as long term planning and policy making.
- It also provides a way to motivate lower level managers and workers.

- Managers and workers in an individualistic system tend to be motivated by measurements that emphasize their individual performances.
- It is a tool for cost control and cost reduction exercises resorted to, by the management from time to time. Budgetary and standard costing techniques are applied.

Criticisms of Responsibility Accounting

The Responsibility accounting is separating a company into various parts or units of responsibility centers for controlling the entire organization. But this separation creates the problem of non-cooperation among the various divisions within the organization. The top level management may find difficulties for coordinating the activities of the groups.

In addition to that, ignoring the interdependencies prevents teamwork and creates the need for protection such as additional inventory, workers, managers and capacity. The effectiveness of the management as a whole become worthless however, these additional resources lose their utility because it is being kept idle for long time. For this reason, critics of traditional accounting control systems advocate managing the system as a whole to eliminate the need for buffers and excess.

Lesson 3.2 - Activity Based Costing

Introduction

Activity-Based Costing (ABC) is a costing model that identifies activities in an organization and allocates the indirect resources to each activity for completion of the production of goods and services. It relates indirect cost to the activities that drive them to be incurred.

In traditional costing system, the indirect costs are allocated on the basis of volume of output. Over a period of time, the technology has been improved and it requires adopting a change in method of cost structures for the allocation of overhead on the basis of cost drivers.

Definition

Activity Based costing is “A method of measuring the cost and performance of activities and cost objects. Assigns cost to activities based on their use of resources and assigns cost to cost objects based on their use of activities. ABC recognizes the causal relationship of cost drivers to activities.”

-- Peter B. B. Turney

Some examples of indirect costs and their drivers are:

1. **Maintenance costs** are indirect costs and the possible driver of this cost may be *the number of machine hours*,
2. **Handling raw-material cost** is another indirect cost that may be driven by *the number of orders received*,
3. **Inspection costs** that are driven by *the number of inspections or the hours of inspection or production runs*.

Generally, the cost driver for short term indirect variable costs may be the volume of output/ activity; but for long term indirect variable costs, the cost drivers cannot be related to volume of output/ activity.

Example

The activity is delivering goods. The costs of this activity include the truck drivers' wages, fuel, depreciation of the truck, insurance, etc. The quantities of the resources that will be consumed by this activity are influenced by the number of deliveries made per year. Hence the cost driver could be the number of deliveries. A cost driver is designed to allocate the delivery activity cost pool to the cost objects.

The activity driver measures how much of the activity is used by the cost object. **Example:** Product A is delivered once a month, whereas product B is delivered once a week. Products A and B require a different number of deliveries, hence the cost of the delivery activity should be assigned to each product on the basis of the number of deliveries each uses.

We can classify the cost drivers into two categories such as structural and execution. **Structural cost drivers** that are derived from the business strategic choices about its underlying economic structure such as scale and scope of operations, complexity of products, use of technology, etc and **Execution cost drivers** that are derived from the execution of the business activities such as capacity utilization, plant layout, work-force involvement, etc.

The establishment of cost drivers are essential for the different cost pool stream to carry out Activity based costing. It is developed to provide more-accurate ways of assigning the costs of indirect and support resources to activities, business processes, products, services, and customers.

ABC systems recognize that many organizational resources are required to provide a wide arrangement of support activities that enable a variety of products and services to be produced for a varied group of customers. The ABC goal is to measure and then price out all the resources used for activities that support the production and delivery of products and services to customers.

The basis of Activity Based Costing is

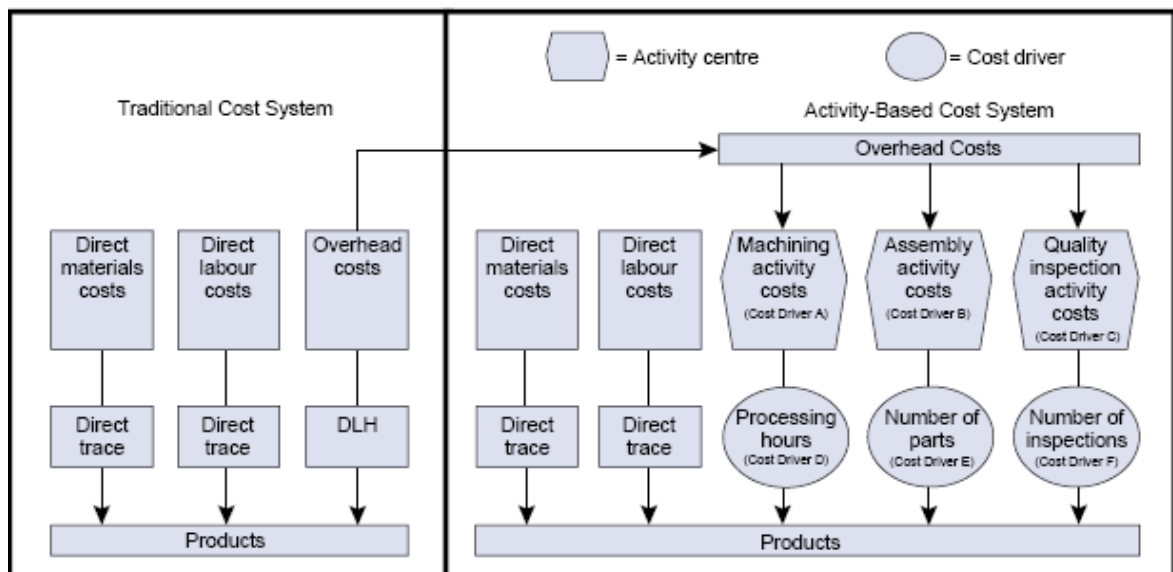
1. Identify the activities required to produce the cost of the product or service.
2. Allocate the resources on each activity
3. Establish the cost drivers on each activity and count its numbers,
4. Determine the cost per cost drivers,
5. Determine the amount of activity required for each product and service
6. Determine the real cost for a single product or services.

ACTIVITY	COST DRIVER
Production set-up	Number of production runs
Production control	Number of production process changes
Engineering	Number of engineering change orders
Maintenance	Number of machine hours
Power	Number of kilowatt hours

Difference between Traditional Cost System and Activity Based costing system

	Traditional	Activity Based Costing
1	Uses Unit Based Costing	Recognizes activities are the causes of costs
2	Geared to manufacturing environments	Concepts can be implemented outside manufacturing
3	Useful in a one product environment	Valuable in a multi-product environment
4	External reporting focus	Internal management decision making focus
5	Potential for poor decisions due to product cross-subsidization	Potential to cut costs by identifying the “true” costs of the product and increase profitability

From the following Diagram we can compare the system of traditional and ABC:-



In Traditional cost models the resources are applied to products in two ways. That is known as direct costs and indirect cost. The direct cost is the cost which is attributed directly to the product e.g., material and direct labor whereas the indirect cost like sales, marketing and administrative costs are not included in product costs.

Activity Based Costing (ABC) does not change the way material and direct labor are attributed to manufactured products. The primary task of activity based costing is to break out indirect activities into meaningful pools which can then be assigned to processes in a manner which better reflects the way costs are actually incurred. The system must recognize that resources are consumed by processes or products in different proportions for each activity.

All costs are existed in resources like material, labor, space, equipment and services. Resources are consumed by activities which have no inherent cost. The cost associated with activities represents the amount of resource they consume per unit of activity. Resources and activities are then applied to cost objects, that is, the purpose for which the resource is consumed and the activity is performed.

The resource and activity is measured in terms of units which defines the amount of the resource consumed or activity required by a unit of demand for it. Resources can be consumed by resources (e.g. office space resource is consumed by an employee resource), by activities (e.g. telephone resource is consumed by a customer service call activity) or by cost objects (e.g. material resource is consumed by a product cost object).

Activities can be performed in support of another activity (e.g. invoice printing activity supports the billing activity) or in response to a cost object (e.g. purchase orders are issued to support the material acquisition process). A cost object can be a process or product and either an interim cost object or an end user (customer) cost object. For example, hiring personnel may be a cost object of Human Resources Department utilizing space, utility, telephone, supply and labor resources and performing advertising, calling, interviewing and orientation activities. That cost object may be a resource used by other departments to secure labor resource for their department.

A network of resources, activities and cost objects are to be constructed in the operational flow of the process. Each resource and activity has a unit of measure which converts them at a unit of demand rate. First, we need to understand the business process and it is to be identified and develop a cost model. The cost model is essential and it must be useful and effective in determining the process. The costs are attached to determine the cost of the defined process.

Activity-Based-Costing is necessary for the following reasons.

- To Understand True profitability of the customers, products, or services
- To Quantify the cost of non-value added activities such as errors and reworks,
- To Identify opportunities to reduce costs and/or increase efficiency,
- To Obtain actionable information to negotiate price increases for unprofitable clients,
- To Understand why profitability may be mediocre despite good strategic fundamentals,
- To Stratify overhead costs so they can be managed more effectively

ABC Model

The objective of an ABC implementation is to relate all of the costs of doing business to products, services, or customers. Developing the initial model consists of the following five steps:

1. Identification of the Resources (expenditures) of an organization
2. Determination of Activities (work performed) that are supported by Resources
3. Description of the Cost Objects (products, services, customers)
4. Development of Resource Drivers to link Resources to Activities
5. To Develop the Cost Drivers to link Activities to Cost Objects

1: Identification of Resources

Resources represent the expenditures of an organization.

Example: production labour, sales and marketing labor, occupancy and utilities, equipment, and supplies. These are the same costs that are represented in a traditional accounting view; unlike traditional accounting, ABC links these costs to products, customers, or services.

2: Determination of Activities

Activities represent the work performed in an organization.

Example: ABC Activities for the sales department in a typical organization might include: Making sales calls to existing customers, Making sales calls to potential customers, Making customer service calls, Training product representatives, Evaluating products and improving product knowledge, Distributing samples, Attending trade shows and other events.

In traditional accounting, the cost of the sales department is breaking into salaries, benefits, allocated rent, supplies, and so on. Unlike traditional accounting, which reports what the costs are (i.e. salaries, benefits, rent); ABC accounts for these costs based on what activities caused them to occur. By determining the actual activities that occur in

various departments, such as accounting, customer service, and sales, it is then possible to more accurately relate these costs to customers, products, and services.

3: Description of the Cost Objects

ABC provides profitability by one or more cost object, usually represented by products, customers, and/or services. Cost Object profitability is utilized to identify money losing customers, to validate separate divisions or business units, or to measure the performance of individual projects, jobs, or contracts. Defining the outputs to be viewed is an important step in a successful ABC implementation.

4: Determination of Resource Drivers

Resource Drivers provide the link between the expenditures of an organization and the Activities performed within the organization.

For example, the total salary of a customer service representative would likely be allocated to the Activities performed based on the amount of time spent performing the Activity. If 50% of her time is spent performing the activity, taking orders for existing customers, 50% of her salary (including all costs such as benefits, taxes, and insurance) would be allocated to this Activity.

5: Determination of Cost Drivers

Determination of Cost Drivers completes the last stage of the model. Cost Drivers trace, or link, the cost of performing certain Activities to Cost Objects.

For example, taking orders for existing customers may be linked to specific customers based on the number of orders taken, if each order takes approximately the same amount of time. If order taking time varies based on the customer, this cost may be linked based on another driver or multiple drivers.

Conclusion

Today, companies are using ABC to make better-informed decisions about pricing, what type of customers to pursue, and what products or services to offer. Activity-Based Costing determines the TRUE COST & PROFITABILITY of customers, products, and/or services. While traditional accounting may provide the business with an accurate sense of the direct costs of the products or services, indirect costs are often less accurately applied. Overhead, such as customer support or marketing costs tend to be allocated based on arbitrary factors.

Activity-Based Costing measures the costs and profits of an organization based on the activities performed within that organization. By focusing on processes that contribute to revenues and business operations, ABC can accurately determine how each process relates back to specific products, customers, or services. This can make a big difference after considering warehouse, sales, customer service, administration and other costs that are often applied at a standard rate, if at all. With ABC, the organization can drill into profitability and performance and any other factor.

Lesson 3.3 - Transfer Pricing

Introduction

Generally, the companies have various divisions or departments with profit and investment centres and the goods are being transferred from one division to another. The profit may be added with cost of goods while transfer takes place. The price on the goods of intra- company transfer from is known as transfer pricing. In this chapter we shall understand the concept of transfer pricing and other related issues.

Transfer Pricing Definition

Transfer price is a notional value at which goods and services are transferred between divisions in a decentralized organization. The prices are set for intermediate products, which are goods, and services that are supplied by the selling division to the buying division. The goods that are received by the buying division may be processed further and before being sold to outside world as final products. We can ask why these kinds of transfers occur within the organization. This is because of the finished goods of one division becomes the raw material of another division.

For example, we can take textile Industry; it involves various processes for getting the final product which is used by the ultimate consumer. The processes are spinning, doubling, dyeing, weaving, printing, garments and designing. The finished product of each division becomes the input of the next division. Therefore, the output of each division must be transferred to another. A notional profit may be added with cost price while transfer takes place for the purpose of accounting and measuring the performance of each division, because each division has responsibility centers such as profit and investment.

The price charged for the inter-departmental transfers is revenue to the selling division and cost to the buying division. That is why the concept of transfer pricing is a technique of strategic decision. The transfer

price charged on goods transferred affects the profits of both transferor and transferee division. The benefit earned by one division becomes the cost of other division. However, the selling division may charge higher prices for the goods transferred due to show higher profit. It affects the buying division because cost of input become high due to the higher profit is added to the price paid by them. But the overall profitability of the organization remains unaffected.

Objectives of Transfer Prices

A sound transfer price system should accomplish the following objectives:

1. Divisional autonomy
2. Divisional performance appraisal
3. Goal congruence

1. Divisional Autonomy

The division manager must take sound decisions to show their divisions' efficiency through its responsibility centers, a sound transfer pricing system act as a motivational force and it serves the effective communication for such decision. This can happen when the division manager takes the action to improve the reported profit of his division and it improves the profit of the company as a whole.

2. Divisional Performance Appraisal

Profit is the yardstick for measuring the performance. Transfer pricing facilitates to measure the divisional performance.

3. Goal Congruence

The division manager's goal must be positively correlated with the goal of organization as a whole. The decisions taken by the divisional managers for increasing their divisional profit should not affect the profits of the other divisions. The transfer pricing system must serve as a motivational force to the division managers and at the same time it should not go to the beyond level at which injures the goal of entire organization.

Usefulness of Transfer Pricing

The concept of transfer pricing is used:-

- To identify unit contribution to the total profit,
- To encourage profit consciousness,
- To Measure management performance,
- To Maximize operating unit profitability,
- To Locate profits to minimize tax,
- To Facilitate decentralized decision making,
- To Motivate divisional managers, towards goal congruence, and
- To serve as a tool for control.

The disadvantages of transfer pricing

- Divisional managers may try to achieve the divisional profits rather than corporate profit,
- It creates confusion on the price of the final product due to the lengthy disagreements on prices,
- It may be incurred an additional administrative costs,
- Arguments over disposition of variances,
- Task of eliminating book profits arising from interdivisional profits.

Organisational Framework

There is various method of arriving transfer prices; the right method is used under the right conditions, but there is no single method ideal in all situations. The organizational situation may differ from one firm to another, it is mainly depends upon the nature of industry, organization structure, its culture, degree of centralization etc.

The following factors are to be considered when developing procedure for determining transfer prices:-

1. The role of the corporate office when the prices are centrally administered,

2. The degree of internal bargains,
3. Accountants' role, and
4. Whether the prices are to be related to costs or resulting from selling prices.

The company's organizational structure is very important factor which is to be considered on the following grounds:-

1. Nature of industry and size of operations,
2. Extent of vertical and lateral integration,
3. Extent of decentralization, and
4. Objectives before the management.

Other significant aspects that need to be considered are

1. Sourcing decisions
2. Manufacturing processes
3. Market situation
4. Control Exercised by the centre can include certain areas

1. Sourcing Decisions

Whether the divisions of buying and selling can take sourcing decisions by themselves or some other divisions can take such decisions.

2. Manufacturing Processes

- a. Mass, batch or unit,
- b. For stock or against specific orders, and
- c. Whether raw material, intermediate or and products.

3. Market Situation

- a. Buyer's vs. seller's market,
- b. If market price is readily available,
- c. Extent and nature of competition.

4. Control Exercised by the centre can include the following areas

- a. Sourcing,
- b. Pricing,
- c. Profitability,
- d. Return on investment,
- e. Cost performance,
- f. Approval of unit budget,
- g. Cash flow,
- h. Approval of capital expenditure,
- i. Turnover and,
- j. Market share.

Issues in Transfer Pricing

A rational system of transfer pricing is required to ensure profitability at each level. Ideally the decentralized profit centre is a device for measuring and evaluating performance as well as motivating divisional management to achieve corporate goals. When the company extends its operations beyond national borders, new dimensions and complications are added to the transfer- pricing problem.

The main issues to be considered for a universal example are:

- Taxes and duties-local sales tax, octroi, excise duty and custom duty.
- Market conditions.
- Ability of the potential customers to pay for a company's product different profit transfer rules.
- Conflicting objectives of a joint venture partner.
- Government regulations-local, state and central laws.
- Import regulations.

Types of Transfer Pricing

1. Cost-based method comprising

- i. Actual or full cost
- ii. Variable cost, and
- iii. Standard cost.

2. Revenue-based method comprising

- i. Cost-Plus,
- ii. Market price, and
- iii. Negotiated price.

3. Hybrid or Dual pricing method.

1. Cost-based method comprising

Actual or full cost

Under this method, the transfer price is fixed at full cost. There is a question arise i.e., which cost should be considered? There are different types of cost such as direct cost & indirect cost, variable cost & fixed cost and cost of production & cost of sales. The adoption of cost is differing in one firm to another, based on the nature, volume and capacity of the business enterprise. Generally, the cost of sales is adopted for fixing transfer price.

Determination of Transfer price at Full cost method:	
Example problem:	₹
Divisional Fixed cost	375,000
Variable cost per piece	5
Target volume of production	200,000 per year
Solution:	1,000,000
Variable cost = 200,000*5	
Add: Fixed cost of division	375,000
Total cost	1,375,000
Transfer price = 1,375,000/200,000	6.88 per piece

We can understand from this example is that the transfer price is fixed on full cost in the division.

Variable Cost

This concept represents the additional outlay costs incurred up to the point of transfer i.e., the expenses that are directly associated with the production and transfer of the goods and services. The direct expenses are raw materials, Wages and production of the division. These expenses are varied with the volume of output. This method is very useful for overall view when there is an excess capacity in the supplying division; it leads to the purchasing division to act accordingly.

Standard Cost

The materials, labour and overheads are charged at pre-determined rates. Under this method, the costs of goods are free from fluctuations in the components of cost. The buying division is known in advance about the transfer price; hence it can plan in well advance to show the effective performance in their appraisal.

Under this system, the fixed costs are absorbed on the allocated or predetermined fixed cost. It is a drawback of this system; however, the actual efficiency would not be considered when the actual fixed costs are absorbed at a lower rate in their controlling system. This may discourage the division's performance of cost control. That is why some companies are followed only variable costs are in estimated price or standard but actual fixed costs are absorbed in every month.

2. Revenue-based method comprising***Cost-plus mark-up pricing***

Under this method, the cost of sale of goods is taken as usual in cost concept but here it is added with some percentage of profit. The percentage of profit is determined the Companies that follow cost-plus pricing method is taking the position that profit must be shown for any products or service at every stage of movement through the corporate system. While cost plus pricing may result in a price that is completely unrelated to competitive or demand conditions in the international markets, many exporters use this approach successfully.

Market based Transfer price

A market based transfer price is derived from the price required to be competitive in the market. Under this method the goods are transferred between divisions on open market prices, which possesses the advantage for optimal decisions without any constraints. The divisions can get the status of sovereignty and it facilitates to achieve the maximum profitability of both divisions and the organization as whole.

Negotiated price

Negotiated price is the price of mutual bargain between the buying and selling divisions for transferring goods or services. The purchase division may or may not accept the deal and it may obtain outside bids and negotiate with external suppliers.

The negotiated price is suitable under the following circumstances:-

- The negotiators must share the market information.
- The full support and involvement of the top management is essential.
- The external market should be existed.
- There should be a freedom of external buying and selling for both divisions.
- The market information must be available.

Drawbacks of the negotiated pricing method:-

- The negotiation process makes time delay and the unnecessary effort while transferring the goods.
- It creates the problem of conflict among the divisions.
- The final result is based on the managers' negotiation skill.
- The cooperation among the divisions may disrupt due to conflict among the divisions.
- The principle of decentralization is affected when the top management compromising the divisions.

3. Dual Rate Method

The dual pricing strategy overcomes the problems between buying and selling division of marginal cost. That is the selling division is credited with a price based on the total cost plus mark-up and the buying division is debited with marginal cost. This may lead to some difference between the two prices and the difference is transferred to the Transfer Price Adjustment Account. This account is adjusted with the profits of two divisions to show the correct profit for the organization as a whole.

Drawbacks of the Dual Rate method:-

- This method is not suitable when multi-variety of goods or services are being transferred to different divisions.
- The principle of decentralization is affected because the head office has to maintain the Transfer Price Adjustment Account.
- Both buying and selling divisions cannot get high incentives because of non-monitoring the performance.
- The selling division is encouraged to sell more units internal when the outside market condition is poor, and also the buying division may go for internal purchase without negotiating with external suppliers for favourable prices.

Lesson 3.4 - Cost-Volume-Profit (CVP) Analysis

Concept of CVP analysis

CVP analysis involves the analysis of how total costs, total revenues and total profits are related to sales volume, and is therefore concerned with predicting the effects of changes in costs and sales volume on profit. It is also known as 'breakeven analysis'.

CVP analysis is an important tool of profit planning. It provides the details related to-

- Behaviour of cost in relation to volume,
- Volume of sales or production at the level of Break Even,
- Estimated profit for the projected sales,
- Estimated sales or production for the targeted profit,
- Sensitivity of profits at the various level of output,

Thus, the CVP analysis can be defined as a managerial tool showing the relationship between various ingredients of Profit Planning, i.e., cost, price and volume.

This technique is used by Finance Manager for taking various decision making in the process of Management control system in the following respects:-

- Forecasting of profit
- Budget planning. The volume of sales required to make a profit (breakeven point) and the 'safety margin' for profits in the budget can be measured.
- Pricing and sales volume decisions.
- Make or Buy decisions
- Plant Merger decisions
- Maximizing the profit when there is Key factor or limited factor,

- Sales mix decisions, to determine in what proportions each product should be sold.
- Decisions that will affect the cost structure and production capacity of the company.
- Determining the overhead cost at various levels of operations.
- Export decisions whether to accept or reject,
- Shut down or continue in production decision.

The basic principles of CVP analysis

CVP analysis is based on some assumptions which are as follows:-

- Period cost is known as fixed costs which are constant at any level of activity up to the present capacity. The fixed cost may vary when expanding the capacity. But in case of variable cost which is varied with the volume of output and therefore if one extra unit of product is made and sold, total costs can rise by the variable cost (the marginal cost) of production and sales for that unit.
- Similarly, the total costs may fall by the variable cost per unit for each reduction by one unit in the level of activity.
- The additional profit earned by making and selling one extra unit is the extra revenue from its sales minus its variable costs, i.e. the contribution per unit.
- As the volume of activity increases, there can be an increase in total profits which is equal to the total revenue minus the total additional variable costs. This is the additional contribution from the additional output and sales.
- The total profit in a period is the total revenue minus the total variable cost of goods sold, minus the fixed costs of the period.

Marginal cost statement	
Revenue	X
LESS: Variable cost of sales	(X)
CONTRIBUTION	X
LESS: Fixed Costs	(X)
PROFIT	<u>X</u>

Many companies have found CVP relationships can be helpful in making decisions about strategic and long-range planning, as well as decisions about product features and pricing.

Let us take an example, a company sells 2,000 units of its only product for ₹ 50 per unit, variable cost is ₹ 20 per unit, and fixed costs are ₹ 40,000 per month. Given these conditions, the company is operating at the breakeven point:

Revenues, 2,000 X ₹ 50	₹ 100,000
Variable costs, 2,000 X ₹ 20	40,000
Contribution margin	60,000
Fixed costs	40,000
Operating income	20,000

Contribution margin can be expressed three ways: *in total, on a per unit basis, and as a percentage of revenues.*

In our example,

1. Total contribution margin is ₹ 60,000.
2. *Contribution margin per unit* = selling price - variable cost per unit:

$$\text{₹ } 50 - \text{₹ } 20 = \text{₹ } 30.$$

Contribution margin per unit is also equal:

$$\begin{aligned} &= \text{contribution margin divided by the number of units sold:} \\ &= \text{₹ } 60,000 / 2,000 = \text{₹ } 30. \end{aligned}$$

3. *Contribution margin percentage (also called contribution margin ratio or Profit Volume ratio i.e., PV ratio)*

$$\begin{aligned} &= \text{contribution margin per unit divided by selling price:} \\ &= \text{₹ } 30 / \text{₹ } 50 = 60\%; \end{aligned}$$

It is also equal to

= contribution margin divided by revenues:

= ₹ 60,000 / ₹ 100,000 = 60%.

This contribution margin percentage means that 60 percents in contribution margin is gained for each ₹ 1 of revenues.

Break Even Point

To avoid operating losses, managers are interested in the *breakeven point* calculated using CVP analysis.

Concept of Break-Even Point

The breakeven point is the quantity of output sold at which total revenues equal total costs. There is neither a profit nor a loss at the breakeven point.

The formula for BEP is,

BEP in Units =	$\frac{\text{Total Fixed Costs}}{\text{Contribution Per unit}}$
BEP in Revenues =	$\frac{\text{Total Fixed Costs}}{\text{P/V Ratio}}$

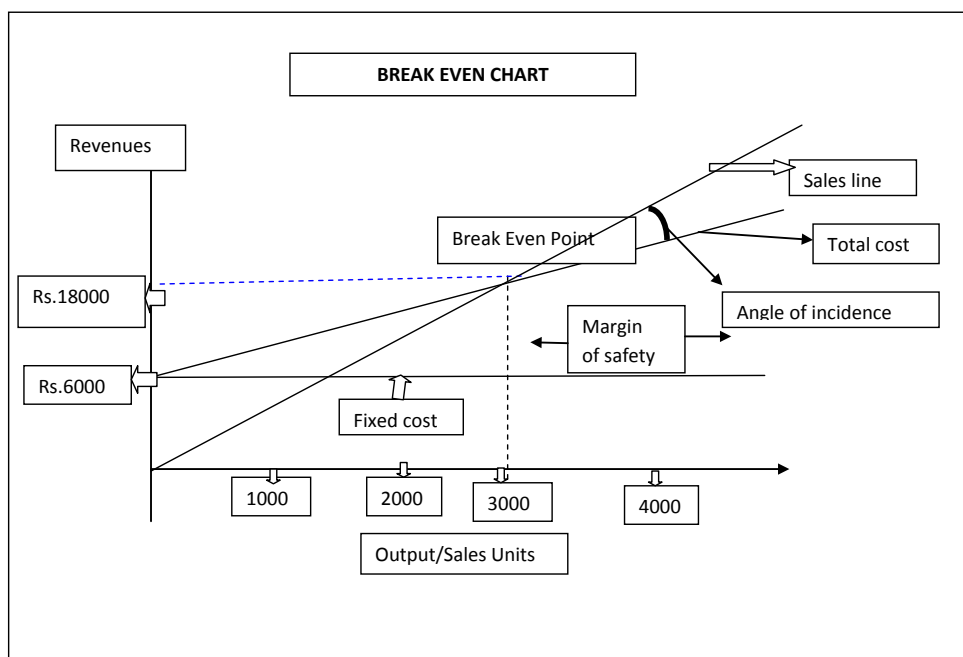
Let us study this concept with the help of breakeven charts and P/V charts in an example: Company X Ltd. makes and sells a single product. The variable cost is ₹ 4/unit and the variable cost of selling is ₹ 1/unit. Fixed costs total ₹ 6,000 and the unit sales price is ₹ 6. Co X. Ltd. budgets to make and sell 3,600 units in the next year. Calculate BEP in units and Value in terms of Rupees. And also draw a breakeven chart, and a P/V graph, each showing the expected amount of output and sales required to breakeven, and the safety margin in the budget.

Solution

BEP in Units =	$\frac{\text{Total Fixed Costs}}{\text{Contribution Per unit}}$
Fixed cost =	₹6000
Contribution per unit =	Selling price per unit - Variable cost per unit ₹ 6 - ₹ 4 = ₹2
BEP in Units =	₹ 6000/ ₹ 2 = 3000 Units

BEP in Revenues =	$\frac{\text{Total Fixed Costs}}{\text{P/V Ratio}}$
Fixed cost =	₹ 6000
P/V Ratio =	contribution/sales * 100 (₹ 2/ ₹ 6)*100 = 33.33%
BEP in Revenues=	₹ 6000/33.33%= ₹ 18000

A breakeven chart records the amount of fixed costs, variable costs, total costs and total revenue at all volumes of sales and at a given sales price as follows:



The 'breakeven point' is where revenues and total costs are exactly the same, so there is no profit or loss. It may be expressed in terms of units of sale or in terms of We can understand while reading from the graph, the breakeven point is 3,000 units of sale and ₹ 18, 000 in sales revenue.

The '**margin of safety**' is the amount of difference between actual output/sales and the Break Even sales/output and it can be expressed as a percentage of the budgeted sales volume. In our example, the margin of safety is calculated as follows:-

	Units
Budgeted sales	3,600
Breakeven point	<u>3,000</u>
Margin of safety (MOS)	<u>600</u>

As a percentage of budgeted sales; the

$$\text{MOS} = 600/3,600 = 16.67\%.$$

A high margin of safety shows a good expectation of profits, even if the budget is not achieved.

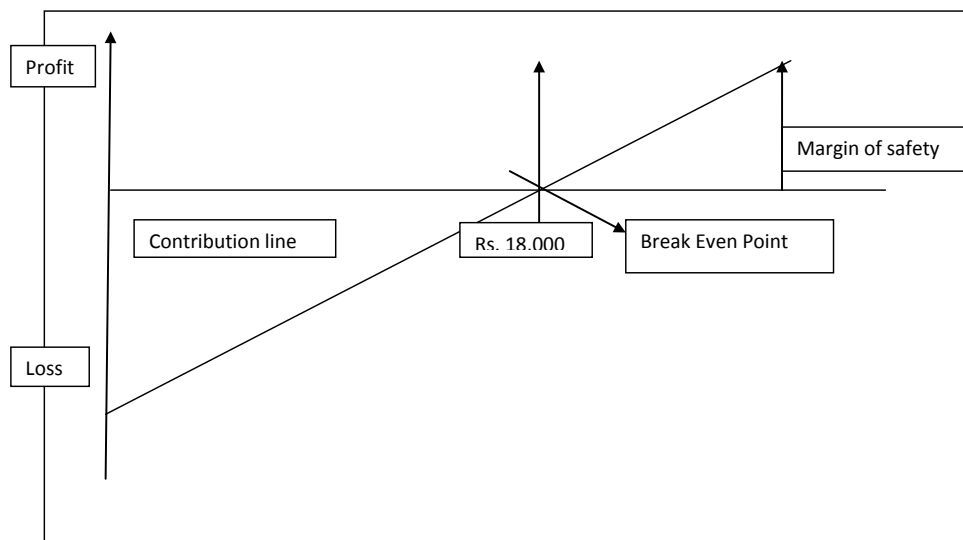
The Profit/Volume (P/V) graph

The P/V graph is similar to the breakeven chart, and records the profit or loss at each level of sales, at a given sales price. It is a straight line graph, drawn by recording the following:

- The loss at zero sales, which is the full amount of fixed costs
- The profit/ (loss) at the budgeted sales level.

The breakeven point may be read from the graph as ₹ 18,000 in sales revenue, and the margin of safety is ₹ 3,600 in sales revenue or 16.67% Budgeted sales revenue.

The two points are then joined up. In our example above, the PV/graph is drawn below



The profit/volume (P/V) graph

Angle of Incidence: A curve is formed at the inter-section of total cost line and total sales line is known as angle of incidence. The angle of incidence can be formed on both the side of break-even point i.e., right side and left side.

The right side of the angle of incident indicates the profit area while left side indicates the loss area. The size of the angle of incidence is the indication of quantum of profit or loss made by the firm at different output/sales level.

Utility of CVP analysis:

CVP analysis has great utility in the various areas of managerial decision making, Let us see some important aspects, such as

- Fixation of selling price
- Maintenance of a desired level of profit
- Export decisions
- Key factor decisions
- Shut down or continue in production decisions
- Make or buy decision
- Sales mix decision

Fixation of selling price

CVP analysis helps in fixing the selling price of the products. The cost of the product and the desired profitability are two important factors which govern fixation of selling price of a new product.

Let us take an example,

The marginal cost of product X is estimated at ₹ 100, the P/V ratio is 50%. Determine the selling price for the product?

The selling price = $(100/50) \times 100 = ₹ 200$

Maintenance of a desired level of profit

A company may change its prices from time to time but at the same time they want to maintain the present level of profit or desired level of profit. In this situation they have to increase or decrease the sales volume to attain the desired level of profit. CVP analysis is used to find the sales volume. The formula is,

Sales volume in units = $(\text{Fixed cost} + \text{Desired Profit}) / \text{Contribution per unit}$

Sales Volume in ₹ = $(\text{Fixed cost} + \text{Desired Profit}) / \text{P/V ratio}$

Export decisions

Generally, the Export order price of a product is lower than the domestic price which is accepted due to compete in the global market. Sometimes this price may be much lower than the total cost of a product. In this case the manager has to decide whether to accept the order or not? CVP analysis is used for this decision making. However, the export order price is compared with the contribution margin. The manager can decide to accept when the export order price per unit is more than the variable cost and it may give the minimum contribution margin.

Key factor decisions: A firm is producing different types of products; it may have the problem of shortage in its factors of production such as shortage of Raw material, limited labour hours, Machine hours, limited production/sales etc. The manager must decide the level of production

for each product and at the same the combination of these productions must achieve a maximum level of profit. The contribution per key factor determines the production level to achieve maximum profit.

Let us take an example

A company produces product X and Y, the raw material is same for both products, product X requires 2 kg and Y requires 3Kg of raw materials for producing one unit of output. Both the products give the contribution per unit of ₹ 6. The company is facing the problem of shortage of raw material. Which product should produce more? Why?

	Product X	ProductY
Contribution per unit =	₹ 6	₹ 6
No. of Kg of raw material required for 1 unit of output	2 kg	3kg
Contribution Per Key factor (i.e., raw material per kg) =	₹ 3	₹ 2

The product X should produce more than product Y because which gives relatively more profit however, the contribution per key factor is higher in case of Product X than that of product Y.

Shut down or continue in production decisions

Shutdown problems involve the following types of decisions:

- Whether or not to close down a factory, department, product line or other activity, either because it is making losses.
- If the decision is to shut down, whether the closure should be permanent or temporary. Shutdown decisions often involve long term considerations, and capital expenditures and revenues.
- A shutdown should result in savings in annual operating costs for a number of years in the future.
- Closure results in release of some fixed assets for sale. Some assets might have a small scrap value, but others, e.g. property, might have a substantial sale value.

- Employees affected by the closure must be made neglected or relocated, or they may be even offered early retirement. The compensation involves heavy and lump sum payments and which must be consider while taking shut down decision.

Make or buy decisions

A company is often faced with the decision as to whether it should manufacture a component or buy it outside.

Let us take an example; a company makes four components, A, B, C and D, with expected costs for the coming year as follows:

	A	B	C	D
Production (units)	1,000	2,000	4,000	3,000
Variable cost per unit ₹	<u>14</u>	<u>17</u>	<u>7</u>	<u>12</u>
Direct fixed costs ₹	<u>1000</u>	<u>5000</u>	<u>6000</u>	<u>8000</u>
Other committed fixed costs ₹	<u>30,000</u>			
Total Fixed cost of all components ₹	<u>50,000</u>			

A subcontractor has offered to supply units A, B, C and D for ₹ 12, ₹ 21, ₹ 10 and ₹ 14 respectively. Decide whether the company A should make or buy the components.

Solution and discussion

- The relevant costs are the differential costs between making and buying. They consist of differences in unit variable costs plus differences in directly attributable fixed costs. Subcontracting will result in some savings on fixed cost.
- The company can save ₹ 3,000/annum by sub-contracting component A, and ₹ 2,000/annum by sub-contracting component D.

	A	B	C	D
Unit variable cost of making ₹	14	17	7	12
Unit variable cost of buying ₹	<u>12</u>	<u>21</u>	<u>10</u>	<u>14</u>
	(2)	<u>-4</u>	<u>-3</u>	<u>-2</u>
Annual requirements in units	1,000	2,000	4,000	3,000
Extra variable cost of buying per annum ₹	(2,000)	8,000	12,000	6,000
Fixed cost saved by buying ₹	<u>1,000</u>	<u>5,000</u>	<u>6,000</u>	<u>8,000</u>
Extra total cost of buying ₹	<u>(3,000)</u>	<u>3,000</u>	<u>6,000</u>	<u>(2,000)</u>

Key Terms

Absorption costing or Full costing

The traditional method of product costing in which both fixed and variable manufacturing costs are treated as product costs and charged to inventories.

Committed fixed costs

Fixed costs that are traceable to a responsibility center but that, in the short run, cannot readily be changed by the center's manager.

Common fixed costs

Fixed costs that are of joint benefit to several responsibility centers. These common costs cannot be traced to the centers deriving the benefit, except by arbitrary means.

Contribution margin

Revenue less variable costs; also, the amount of revenue available to contribute toward fixed costs and operating income (or responsibility margin). The key statistic for most types of Cost Volume Profit analysis. Controllable fixed costs: Fixed costs that are under the direct control of the center's manager.

Cost center

The part of a business that incurs costs but that does not directly generate revenue.

Investment center

A profit center for which management has been given decision making responsibility for making significant capital investments related to the center's business activities.

Negotiated transfer price

The transfer price that results when the supplying and buying divisions negotiate and agree on a transfer price.

Performance margin

A subtotal in a responsibility income statement designed to assist in evaluating the performance of a manager based solely on revenues and expenses under the manager's control. It consists of contribution margin less the controllable fixed costs traceable to the department.

Period costs

Costs that are deducted as expense in the period in which they are incurred, rather than being classified as assets.

Product costs

Costs that become part of the inventory value of work in process and finished goods. These costs are deducted from revenue in the period that the related goods are sold.

Profit center

The part of a business that directly generates revenue as well as incurs costs.

Responsibility accounting system

An accounting system that separately measures the performance of each responsibility center in the organization.

Responsibility center

The part of a business a particular manager is in charge of and held responsible for.

Responsibility income statement

An income statement that subdivides the operating results of a business segment among the profit centers comprising that segment.

Responsibility margin

Revenue less variable costs and traceable fixed costs. It is a long run measure of the profitability of a profit center and consists of the revenue and costs likely to disappear if the responsibility center were eliminated. Traceable fixed costs: Fixed costs that are directly traceable to a specific center. These costs usually would be eliminated if the center were discontinued.

Transfer price

The dollar amount used in recording products (either goods or services) supplied to one part of a business by another.

Variable costing or Direct Costing

The technique of product costing in which only the variable manufacturing costs are regarded as product costs. Fixed manufacturing costs are treated as period costs. It is useful for the management purposes, but not acceptable for use in financial statements or income tax returns.

Self Assessment Questions

1. Define Responsibility Accounting
2. What are the factors are to be considered in respect of responsibility accounting while using as a device for the management control?
3. Explain various types of Responsibility centers and its mechanisms.
4. Elucidate the merits of responsibility accounting.
5. Define Activity Based Costing. Identify the various activities and its cost drivers with some examples of indirect expense.
6. What are the necessities to adopt the ABC costing?
7. Differentiate between Traditional and ABC costing?
8. State and explain the steps involved while adopting the ABC model.
9. Define Transfer Pricing. State the aims and features of Transfer Pricing?
10. What are the objectives of Transfer Pricing?
11. State and explain the methods of determining Transfer Price.
12. What are the aspects are to be considering before fixing the transfer price?
13. Explain the concept of Cost-Volume and Profit analysis
14. What are the usages of CVP analysis under managerial decisions?
15. What is Break Even Point and how to determine?
16. Draw a Break-Even Chart and a Profit volume graph and explain
17. Elucidate how the CVP is used as a tool for management decision making.
18. Calculate the contribution in each of the following independent situations:
 - a. Fixed cost ₹8,000 Profit ₹ 5,600
 - b. Variable cost ₹ 7,000 Sales ₹11,000
 - c. Contribution per unit ₹ 7, Profit ₹ 3,000. E.Point 2,000 units

Ans. (a) ₹ 13,600 (b) ₹ 4,000 (c) ₹ 17,000
19. Calculate margin of safety in each of the following independent situations
 - a. Break-even point 40%, Actual sales ₹ 40,000
 - b. Actual sales – 40,000 units, Break-even point 25,000 units
 - c. Break-even point – 75%

- d. P/V ratio 40%, Profit ₹ 35,000
- e. Contribution per unit ₹ 20, Profit ₹ 15,000

Ans. (a) ₹ 24,000 (b) 15,000 units (c) 25% (d) ₹ 87,500
(e) 750 units

20. A company manufactures a product and sells it at ₹ 12 per unit. The variable cost per unit ₹ 9 and total fixed cost is ₹ 12,000.

- a. What is the Profit Volume Ratio?
- b. What is the Break-even point in units?
- c. What is the Break-even point in ₹ ?
- e. What will be the profit when sales is ₹ 60,000?
- f. What will be the amount of sales if it desires to earn a profit of ₹ 6,000?

Ans. (a) 25% (b) 4000 units (c) ₹ 48,000 (d) ₹ 3,000
(e) ₹ 72,000.

21. Manufacturer of product A takes 20 hours on machine No. 101. It has a selling price of ₹ 150 and marginal cost of ₹ 110. Component part Y could be made on machine No.101 in 4 hours. The marginal cost of component part is ₹ 9 of which outside supplier's price is ₹ 15.

Should one make or buy component Y. Discuss both situations when

- a. Machine No.101 is working at full capacity
- b. There is idle capacity

Ans. (a) It is better to buy than to make component Y
(b) It is economical to make the product Y than buy it.

22. Write short notes on:

- a. Margin of safety
- b. Angle of incidence
- c. Break Even point
- d. Make or buy decision
- e. Export Decision

CASE STUDY

X Ltd., has purchased a small company that specializes in the manufacture of a part identified as No.AIL-201. The company is a decentralized organization and as such treats the newly acquired company as an autonomous division called Spare Parts Division with full profit responsibility. The Spare Parts Division incurred fixed cost of ₹ 30, 000/- per month and variable cost of ₹ 18 per unit. The selling price per unit is ₹ 30/-. The operating capacity of this division is 5,000/- units per month. The Finished Goods Division of the company is currently purchasing 2,500 units per month of the part No.AIL-201 from an outside supplier at ₹ 29/- per unit, which represents the normal price of ₹ 30/- less quantity discount. The top management of the company wishes to decide what transfer price should be used.

The following alternative prices are under consideration:

- a. Market price of ₹ 30/-
- b. The price of ₹ 29/- that the Finished Goods Division is currently paying to the outside supplier
- c. A negotiated price of ₹ 23.50 that is calculated as variable cost plus half of the benefits of an internal transfer.
- d. Full cost of ₹ 24/- which is variable cost plus fixed cost per unit
- e. Variable cost of ₹ 18/-

Solution:				
Spare Parts Division 5,000 Units				
	(a)	(b)	(c)	(d)
Selling Price	1,50,000	1,47,500	1,33,750	1,20,000
Less: Variable cost	90,000	90,000	90,000	90,000
Contribution	60,000	57,500	43,750	30,000
Less: Fixed cost	30,000	30,000	30,000	30,000
Profit and Loss	30,000	27,500	13,750	NIL
Finished Goods Division 2,500 Units				

	(a)	(b)	(c)	(d)
Buying Price	75,000	72,500	58,750	60,000
Less: Price being paid to Outside supplier	72,500	72,500	72,500	72,500
Additional amount being spent on account of Internal Transfer / Net savings	2,500	NIL	13,750	15,000

(a) The alternative of transferring the product at Market price of ₹ 30/- is unrealistic because the Finished Goods Division will never agree to pay a price more than the price it is currently paying. Thus the overall profits of the organization would decline by ₹ 2, 500/- which represents the additional amount being spent by Finished Goods Division on account of internal transfers.

(b) The price of ₹ 29/- that the Finished Goods Division is currently paying to the outside supplier would be the most appropriate transfer price if the top management wishes to treat the two divisions as autonomous investment centres. This price will bring all the benefits of internal transfer to the Spare Parts Division while maintaining the position of the Finished Goods Division.

(c) A negotiated Price of ₹ 23.50 which is calculated as variable cost plus half of the benefits of an internal transfer would be an appropriate transfer price if top management wishes to treat the divisions as investment centres, but wishes to share the benefits of an internal transfer equally between them. Both the divisions are able to benefit from this price.

(d) Full cost of ₹ 24/- will be appropriate transfer price if the top management treats the division like cost centres with no profit responsibility. All benefits from both the divisions will accrue to the buying division. This will help the company to earn profits as a whole, but affect the performance of the selling division (Spare Parts Division) adversely. Another disadvantage of this cost-based approach is that inefficiencies of the selling division are passed on to the buying division.

(e) The transfer price at variable cost of ₹ 18/- would be an appropriate transfer price for guiding the top management in deciding whether transfers between the two divisions should take place. Since ₹ 18/- is less than the price prevailing in the external market and the selling division has excess capacity the transfer should take place. This will maximize the profits of the company as a whole.

But if transfer price of ₹ 18/- is used, all the benefits of this transfer will accrue to the buying division and it will hurt the performance of the selling division.

Fixing the right transfer price is a complex phenomenon. Therefore, the managers should adopt a proper route which is consistent with the overall objective and it must try to achieve the shareholders wealth maximization. Even though, the transfer pricing has many issues which is using as a tool for the mechanism of control and fixing managerial responsibilities.

UNIT – IV

Learning Objectives

After Studying this unit you should be able to understand:-

- Behavioural Aspects of control
- Motivation
- Morale
- Participative Management
- Learning Curve
- HR Accounting
- Knowledge Management Control
- Risk Management
- Differentiated Control Strategies
- Performance Measurement
- Balance Score cards

Unit Structure

Lesson 4.1 - Behavioural Aspect of Management Control

Lesson 4.2 - Human Resources Accounting

Lesson 4.3 - Differentiated Controls for Different Situations

Lesson 4.1 - Behavioural Aspect of Management Control

Human behaviour is influenced heavily when controlled. What matters is a 'good' control systems pulls positive influence, and sometimes a 'very good' control system breaks the rule. Control systems' thus, should assure that the actions taken to achieve individual performance goals are aligned with the achievement of organizational goals.

Top management is focused with the vision and mission of the organization. But the individual employees will have their own personal growth to look after and not more often consistently loyal to the organization. Hence, the main purpose of any Management control system is to match the highest level possible with the individual goal to the organizational goal.

But unfortunately, in the present imperfect world of business, it is a tough task to do so. What we do in the formal control system is imposing rules to avoid deviation from the performance march past. We can say rules are forms of formal instructions. It is a major equipment to control the management system. For example, to control wastage of raw material in work shop floor, we impose a rule of minimum wastage and maximum wage, where deviation will result in a cut in the pay. Or we make a rule that any purchase expenditure more that 10 lakh rupees to be approved by the Board of Directors to control financial flow.

Factors that Influence Behaviour

Both formal and informal systems influence human behaviour in organizations. This in turn affects the alignment of individual goal and organization goal achievement. Even though the organization is in formal system, still we have to take in to consideration the informal processes like Ethic, Management styles, culture and climate of the organization in order to implement organization strategies.

External factors

External factors are norms of desirable behaviour that exists in the society of which the organization is a part. These norms include a set of attitudes, often collectively referred to as the work ethics, which is manifested in employee's loyalty to the organization. These may vary from area to area, nation to nation. It depends on the culture of the society, Education system; background of the person, parental style and so on. Some countries like Singapore and Japan are extra ordinary in work ethics when compared to other countries.

Internal factors***Culture***

The most important internal factor is the organization's culture. The values and beliefs, Norms and behaviour plays an important role in the behaviour of an individual. A company's culture usually exists unchanged for many years. Certain practices become automatic habits because it is carried out for years.

Management Style

The management style also has a strong influence over the behaviour in a control system. Normally what one gets from the superior is given to the subordinates, and the subordinate gives more or less the same to his subordinates and it goes on.

Informal Organization

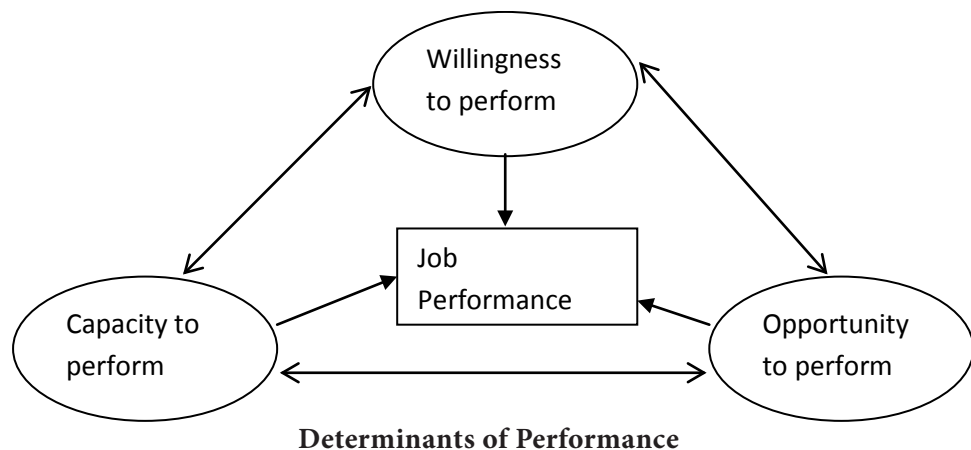
The importance of an informal organization is well understood when practicality is observed. Even though the chart says whom you should report to and whom you should communicate to, in reality you may be communicating and informally reporting to many departments in an organization. A control system when allows space for this informal organization and flexible enough to accept this succeeds easily.

Perception and Communication

In working towards the goal congruence, the personnel who are real performers in the field should know what to be done and what is expected from them. The channels of communication are often wide and complex leading to misunderstandings and misperceptions. Moreover, the communications received may conflict with each other. Hence a control system should deal with information control with sufficient importance attached to it.

Motivation

Motivation plays the central role in shaping one's behaviour, especially influencing work performance in organizations. Motivation is made up of three distinct components. First one is Direction which refers to what an individual chooses to do when presented with a number of possible alternative courses of action. The second one is intensity, which refers to the strength of the individuals responses once this choice is made. Finally, persistence refers to the staying power of behaviour, or how long a person will continue to devote effort. Further, the determinants of performance can be explained through the below diagram



As seen from the diagram job performance may be viewed as the combination of the three functions – Willingness to perform, opportunity to perform and capacity to perform. These are generated from within an individual and often stimulated by external forces.

The capacity to perform relates to the degree to which an individual possesses what is supposed to be done and how to do it. Opportunity to

perform is often viewed as a critical factor. One may fail in this not only because of lack of capacity but may be failing to identify or failing to make right decisions.

Willingness to perform relates to the degree to which an individual both desires and is willing to exert effort towards attaining job performances. It is in other words, motivation and it is what really counts. No combination of capacity and opportunity will result in high performance if the willingness or motivation is missing.

The performance of employees is can be influenced by the motivation given by the managers. If managers intervene and help creating an atmosphere that encourages, supports and sustains improvement, certainly the performance level raises.

The needs, abilities and individual goal of the employees must be considered by the mangers while considering differences in preferences.

Agency Theory

Agency theory explores how contracts and incentives can be used as motivation tools to achieve goal congruence. An agency relationship exists whenever one party (the principal) hires another party (The agent) to perform some service and in so doing, delegates decision making authority to the agent. In an organization share holders are the principal and the Top –level Manager, say a CEO is the agent. At the other level, the CEO is the principal and the unit managers are the agents. The challenge is how to motivate the agents' so that they will be productive as they would be if they are the owners.

Agency theory conceptualise that the principals and agents have divergent preferences or objectives. The theory assumes that all individuals act in their own self-interest. Agents are assumed to receive satisfaction not only from financial compensation but also from the perks involved in an agency relationship, such as leisure time, good environment, club memberships etc.

Principals on the other hand are interested only in the financial returns from the investments.

The agents and principals differ in the risk preference also. When agents depend on their wealth tied up with the fortune of the company, the principals reduce their risk by investing in various companies.

Control Mechanisms

Monitoring and Incentive contracting are the two control mechanisms suggested by the agency theory.

Monitoring

The principal can design control systems that monitors that agent's actions. For example, financial reports and performance appraisal are tools of monitoring. Agency theory has attempted to explain why different agency relationships involve different levels of monitoring. If the task is not well defined or easily monitored, then incentive contracting becomes more appealing as a control device. Monitoring and incentives are not mutually exclusive alternatives. In most firms, the CEO has an incentive contract along with financial statements that acts as a monitoring device.

Incentive contracting

A principal may attempt to limit divergent preferences by establishing an appropriate incentive contracts. The more an agent's reward depends on a performance measure; the more incentive there is for the agent to improve the measure. Therefore, the principal should define the performance measure to that it furthers the employee's interest. The ability to accomplish this is referred to as goal congruence.

When the contract given to the agent motivates the agent to work in the principal's best interest, the contract is considered goal congruent.

Morale

The attitude differs for each individual. The environment the employees work in greatly influences the behaviour and attitude. Managers at all levels are highly concerned about the Morale.

Morale is generally considered as a group phenomenon and in some cases it is viewed as an individual phenomenon. It may be described

as a feeling of the employee towards his work, organization more often related to his personality.

Guion describes morale from the point of view of an individual worker and defines it as the degree to which an individual needs are satisfied and the degree to which the individual desires satisfaction from his total job situation.

Some researchers have the contrast view - that Social or group factor influences morale. They emphasize social reaction and concentrate on attitudes towards group value rather than towards individual values. They place less emphasis on working conditions and more feelings of cohesiveness, group interest and identification with the mission of the group, the optimism about the success of the whole.

Mc Farland defines morale as follows:

“Morale is basically a group phenomenon. It is a concept that describes the level of favourable or unfavourable attitudes of the employees’ collectively to all aspects of their work- the job, the company, their tasks, working conditions, fellow workers, superiors’ and so on.

Morale and control

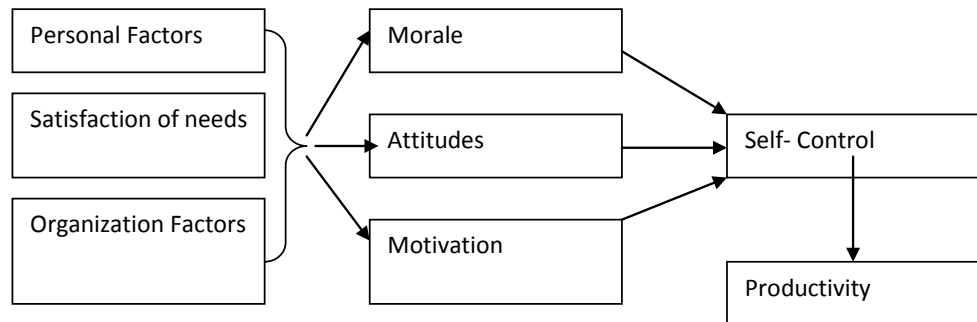
Morale is viewed as an important component for increase in productivity. In the same line of thought, the level of morale also induces the level of control.

In any organization the rules and regulations are imposed in an expectation that it is followed even when supervision is not available. At the end of the day, any manager can understand that self control is more important than any other form of control- say supervision, punishments, pay-cuts, demotions etc.

When as a group, workers unionise or collectively decide to deviate from the control system; it would be the bigger problem the top level management will face more than any finance problem.

The productivity lies in the hands of employees and the morale decides their mental state in their worksites as a group.

Let us see how the control system is linked with Morale and attitudes thru the below diagram.

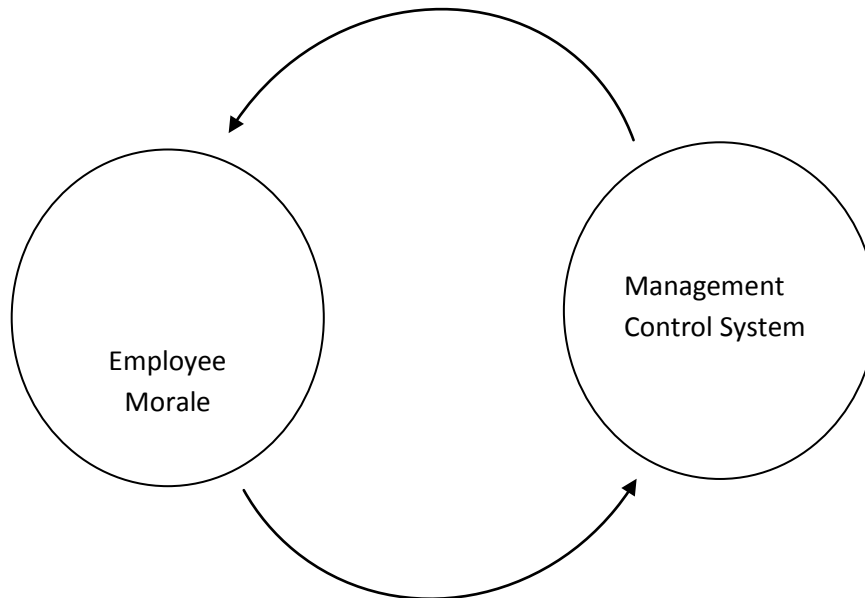


Morale leads to self-control

Management View

Morale is contagious. The reason being, people learn from one another through various communication channels. Hence, to implement an effective management control system, the cultivation of favourable attitudes with morale building objectives is one of the important characteristics of management process. Further, the centre of the process of managing attitudes is for the superior to become the master of his own attitudes because a manager's attitudes are in a large part likely to reappear as attitudes of those who are near him in the organization. The first line supervisor is a key factor in morale because his morale has huge effects on his subordinates.

Control and morale are interrelated. On one hand, the high morale level improves self control in the organization, which helps in effective implementation of management control system. On the other hand, an effective control system like control of absenteeism and tardiness will improve morale. It is a continuous process and a miss in the link may develop a serious trouble for the system. It is explained thru the following diagram.



Even though we emphasise on the efficiency of the control system, there should be a human relations approach to the design of the system to make it acceptable among the employees. When every individual is treated with respect and due care, there would be a trust building which will lead to morale building and thus resulting in efficient control.

Participative Management

Participative Management Advantage

Participative management is a method, which gives employees responsibility, accountability, and authority over their work. The method provides simple tools for employees to improve their work performance and positively impact the bottom line. The process provides an environment to make employee needs known and creates a vehicle for improved communication between all areas of the organization. What differentiates this work is that people's recommendations are actually implemented and acted upon.

We can say that participative management indirectly induces the 'self-control' mechanism, which is rather more powerful than any other control mechanisms.

People solve their own issues and feel empowered within the process of doing so. Executives and employees learn to redesign their workplace to

be participative and self-managing. This does not mean you do away with management. People are not asked to do things that they are not capable of accomplishing. There may be training involved to improve skill sets. This does not resemble laissez-faire management in any way. Managers and employees look at a piece of work and ask what roles and responsibilities need to be placed within the boundaries of the work in order to achieve individual and organization goals?

The idea is to allow as much responsibility, accountability and reasonable authority to people actually doing the work. Participative management addresses the criteria for superior performance. These criteria have been researched, field-tested, around the world and their validity has been proven in many work settings. Participative management creates a workforce that is committed to obtaining positive results for the organization such as increased productivity and improved quality.

People are engaged and motivated and are willing to put forth energy to improve work performance. Participative management works best when the organization has a clear and compelling mission and vision. Employees then can align their personal mission and vision to the organization.

Participative management has clear goals and does not turn over the organization to employees. There is still a hierarchy but it is not a dominant hierarchy, which dictates everything to employees. A non-dominant hierarchy has as many levels as are necessary to do the work of the organization. People have clear roles and responsibilities and manage themselves as much as possible.

Management tells people what the strategy is and what is expected in terms of results and then allows people to figure out the how to deliver on management expectations. Top management still decides strategy and front line employees still focus on their primary tasks. The difference is that the criteria for superior performance are utilized and leveraged for the success of the organization. The criteria for superior performance are drivers of behaviour, reasons why people get up in the morning and are enthusiastic about their work. Pay is considered a satisfier all things being equal.

The criteria for superior performance are:

- Control
- Learning
- Variety
- Mutual Support and Respect
- A Promising Future
- Engage one or several of their preferred life interests
- Challenges that match and stretch individual skills
- Concentration and Focus
- Fun

When the criteria for superior performance are leveraged in an organization the performance will dramatically improve. This has been demonstrated over and over again in thousands of organizations all over the world.

Management in most organizations is constantly attempting to get people more involved in improving the organization. People run up against a brick wall because of the bureaucratic structures that still exist in their organizations. This occurs even after many attempts at improvement. Management has not made it to people's advantage to participate, communicate, and share what they know with team-mates.

Why participate and give ideas for improvement when they are disregarded and not rewarded. People will always do what is in their best interest. If the stated culture of the organization is one thing and the actual behaviour of management is not congruent with how management behaves, then people do not trust what is communicated by management. People are very resourceful and learn to survive in any culture.

Management can attempt to dictate results and people will do what is required of them to meet the very minimum of expectations in this kind of environment. They will rarely do excellent work. The majority of people want to do good work yet the work structures they find themselves in do not reward good work. When you are competing within an organization to get a raise or a promotion and you have to impress your supervisor you will not share important information with your team members. It is not to

your advantage to do this because you are not paid and rewarded to do so. So how we structure work, pay for work and appraise work has to change. Participative management makes it to people's advantage to share their knowledge because when their team is successful they are successful. The group excels because the criteria for superior performance are being applied and top management sees the benefit of all employees contributing to the organization. They want to acknowledge a resource they already pay for their people.

Participative management enables organizations to improve performance through a fast, an economical method called the participative design workshop. It clearly states that the design principle underlying the work is a participative method that has clear goals and simple tools for work process improvement.

It can be utilized to improve the structure of the organization or just for work process improvement. This will depend on the needs of the organization. The workshop begins with the assessment phase, which begins with briefing one. Briefing one is a short presentation of the bureaucratic design principles and its inverse relationship to the criteria for superior performance.

Participants fill out the criteria for superior performance and the skills assessment matrix. The design phase begins with briefing two which is an introduction to the participative design principle and why it leverages the criteria for superior performance. It explains why organizations perform better using these methods. Groups chart their current work process or work flow and flag areas for improvement. They are given clear boundaries in which to work by management. Next, they design improvements for the areas that are deficient and negotiate with management on what is possible to change within the work process. If management wants structure addressed then the group can tackle this issue as well. The workshop gets excellent results even without addressing the issue of organizational structure.

Resistance to the Participative Management Process

Whenever there is change we can expect resistance to the process. Many people do not welcome change even if it is in their best interests.

People do not want to lose power and control. It is the fear of the unknown that causes problems for people. Wilfred Bion's work on group process, or what he calls fight or flight behaviours, or dependency is constantly at play in most bureaucratic organizations. Most organizations are still in part bureaucratic. People will either fight or run away and these behaviours can be very subtle in nature. A question to ask is what does the person acting out perceive they have to lose if a new initiative takes root?

An effective method for managing this type of situation is to reassure the person or group that the change is for the best interest of the organization. From our facilitation experience, all stakeholders are likely to reap tangible and intangible rewards. A top manager that is interested in having a successful Participative Management initiative will be on the constant look out for sabotaging behaviours from threatened individuals. Another behaviour to be on the lookout for is pairing. Threatened individuals will want to pair up with another individual or one who he/she perceives has power and attempt to inhibit the new participative initiative.

Learning Curves

The term learning curve refers to a graphical representation of the "average" rate of learning for an activity or tool. It can represent at a glance the initial difficulty of learning something and, to an extent, how much there is to learn after initial familiarity. Initially introduced in educational and behavioural psychology, the term has acquired a broader interpretation over time, and expressions such as "experience curve", "improvement curve", "progress curve" and "efficiency curve" are often used. Most tasks get faster with practice.

This is not surprising because we have all seen this and perhaps know it in some intuitive sense. What is surprising is that the rate and shape of improvement is fairly common tasks. The pattern is a rapid improvement followed by ever lesser improvements with further practice. Learning is often said to follow the power law of practice.

At one point of time there is a decrease in variance in performance as the behaviour reaches an apparent plateau. The learning curve has implications for learning in education and everyday life. It suggests that practice always helps improve performance, but that the most dramatic

Notes

improvements happen first. Another implication is that with sufficient practice people can achieve comparable levels of performance.

The learning curve is visible with enough aggregation of dissimilar tasks or across similar tasks down to the level of individual subject's strategies. In this context, control system can use this concept in designing phase.

Lesson 4.2 - Human Resources Accounting

The concept of Human Resource Accounting (HRA) is of recent origin. Working on the idea that human assets in an organisation are no less important than its material assets, human resources accounting refers to the method of reflecting the rupee value of the human asset in the company's balance sheet. A balance sheet that does not reveal the current value of company's human assets does not, to say the least, portray the true and fair picture of the company's affairs. This is because the present and future earnings of a company always depend upon the quality of its human organisation.

What is Human Resource Accounting?

The American Accounting Association's Committee on Human Resource Accounting (1973) has defined Human Resource Accounting as "the process of identifying and measuring data about human resources and communicating this information to interested parties". HRA, thus, not only involves measurement of all the costs/investments associated with the recruitment, placement, training and development of employees, but also the quantification of the economic value of the people in an Organization. Flamholtz (1971) too has offered a similar definition for HRA. They define HRA as "the measurement and reporting of the cost and value of people in organizational resources".

Why Human Resource Accounting?

According to Likert (1971), Human Resource Accounting (HRA) serves the following purposes in an organization:

- It furnishes cost/value information for making management decisions about acquiring, allocating, developing, and maintaining human resources in order to attain cost-effectiveness;
- It allows management personnel to monitor effectively the use of human resources;

- It provides a sound and effective basis of human asset control, that is, whether the asset is appreciated, depleted or conserved;
- It helps in the development of management principles by classifying the financial consequences of various practices.

Measurements in Human Resource Accounting

The following methods are generally used to compute the value of human resource of a concern:

(a) **Valuation at cost:** Under this method the employees of an organization are evaluated on the basis of the cost which the organisation has incurred in selecting and training them. It should be noted that under the traditional accounting system this cost is treated as revenue expenditure and is charged to the profit and loss account. But in human resources accounting this cost is capitalised and is shown as an asset in the balance sheet.

(b) **Valuation Economic Cost:** Under the first method the human asset is shown in the balance sheet at its historical cost which is not enough if the balance sheet is to serve as a health chart of the organisation. It is essential for this purpose to show all assets (including human asset) in the balance sheet at their economic value. This is the capitalised value of future benefits expected of each asset. The present capitalised value of every employee in an organisation can be found out by estimating his remaining future earnings from employment (assuming the present promotion policy and pay scales to be constant). The aggregate of such present discounted values is then shown as the value of the human resources assets in the balance sheet. It is, however, questioned, how the capitalised value for future expenses can be asset? It is the value of the benefit expected to accrue that should capitalised and not the amount to be spent for the use of the asset.

(c) **Valuation of Replacement Cost:** Employees can also be valued at their replacement cost, i.e., the amount which will be needed to replace them completely. It should be noted that it is always impossible to replace the present personnel by a new set of people and still have the same organization.

Knowledge Management control

Knowledge Management Control Systems

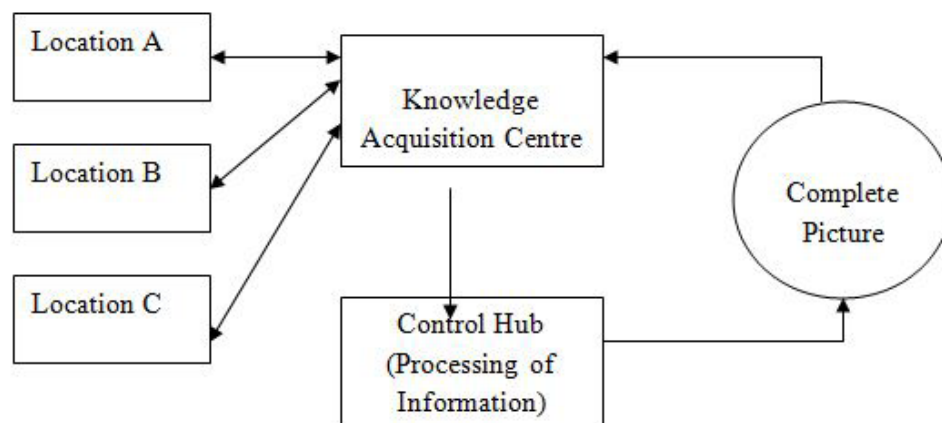
The Knowledge Management Control System is an organizational approach to bridging organizational knowledge gaps between organizational disciplines by providing an uninterrupted process of transforming business data into decision making information. The Knowledge Management Control System empowers people, the right people, throughout the organization to make decisions based on predefined structures of authority. This ensures transparency of data, enabling critical information to be available at the touch of a button. This helps executives see the 'whole picture' and can make appropriate decisions crminating corporate collapses and industrial accidents that ruin the balance sheet, personal bonuses and share holder confidence.

The Knowledge Management Control System ensures executives can manage any business from the brain to the balance, from a remote location, and have organizational structures that drive business growth. The innovation of Knowledge Management control system gives companies a huge competitive advantage over its competitors. By moving the management practices from the industrial age into this electronic age we increase the performance of any business by implementing exceptional risk management practices.

Knowledge Management Control System Model

A control system over Knowledge Management model is imperative to ensure viability of predetermined meanings, predefined actions and pre-specified outcomes.

In this 'complete picture' Knowledge Management Control System Model, business branches spread at various locations, often various countries or continents are linked to a central Hub called knowledge Management control centre. All information's pertaining to day-to-day activities and other planning and implementation works are sent to the hub thru various e- sources. The acquisition centre will collect all these into and process at control centre. The information's are inter-linked and whenever necessary, the 'complete picture' is retrieved by the decision making authority



'Complete Picture' Model

Knowledge workers are largely self-managed problem solvers, as a result, the nature and scope of management has changed. Instead of resting the decision-making authority in the hands of a few members of the organization, management is performed by everyone. Most of the employees plan, organize, lead and control themselves as they solve problems at their worksite, with the help of Knowledge Management Control System. For example, let us see a case.

Zen Agro is an MNC having farms producing agricultural products more or less in all hot and humid countries in the world. Their products are ranging wide from ornamental flowers to oil seeds. The working knowledge and information in their various stations are huge. With the help of Knowledge Management Control System's 'complete picture' model, they acquire and accumulate data at their South African head quarters. The data are not inter-related when received. But, it's interesting to know how knowledge management has helped them encounter two problems.

Ohio Bhasin is the farm manager Zen Agro in Thailand. A chemical he has used to control a particular insect aggravated and increased the growth effect of a weed growing in the farm and this information was registered with the control centre. Six months later Research manager Thomson, in Tanzania farm station was looking for some base info to decide on a fertilizer he has to use to increase the growth rate of a grass variety to feed the cows in their dairy. He was delighted to see the information provided by Ohio Bhasin and decided on that chemical as the weed he has mentioned is of the same family of the grass Thomson needs. From there

on, Thomson increased his productivity and From the information he registered with the control centre Ohio bass started marketing the weed that grows in abundant in his farm as cow feed. Hence, we can understand, Knowledge Management Control System distributes the information to the places where it is necessary and helps in decision making.

Why Knowledge to be controlled?

Consistency is imperative for ensuring homogeneity of processing of the same information in the same manner to ensure the same outcomes and is achieved by minimizing criticism and questioning of the status quo. However, this may take its toll by suppressing innovation and creativity. Even despite organizational control that demands absolute conformance, knowledge worker's attention, motivation and commitment may moderate or intervene in its influence.

Control is often based on rules and hence is difficult to maintain in a world where competitive survival often depends on questioning existing assumptions. Given an environment characterized by radical and discontinuous change, the survival of the organization would hinge on ongoing assessment of assumptions underlying the business logic as well as ensuring that the definition of business performance outcomes is aligned with the changing market conditions, consumer preferences, competitive offerings, business models and industry structures.

Organizational controls tend to seek compliance with predefined goals that need to be achieved using predetermined best practices and standard operating procedures. Such control systems tend to ensure continuity by enforcing task definition, measurement and control, yet they may inhibit creativity and initiative. Enforcement of such controls is essentially a negative activity because it defines 'what cannot be done' and reinforces a process of single-loop learning with its primary emphasis on error avoidance.

Hence design of new control system architectures needs to take into consideration ambiguity, inconsistency, multiple perspectives and impermanency of existing conformation. We can say that the traditional external control systems are slowly transitions into a 'self-control' system in management.

The 'Command and control' system has proved its inadequacy in pulling efficient performance from employees. A self controlled motivated performance and decision making is earning its importance in knowledge management.

Knowledge Management Solutions

Knowledge Management Solutions rely heavily on the human behaviour and cultural aspects of business rather than on computer systems and technology. As the popularity of Knowledge Management increased, the number of tools and methods aimed at supporting Knowledge Management has soared. The main challenge faced by the business houses is to find out which tools or methods are suitable and efficient for them.

Next Generation Knowledge Management control systems

Knowledge Management control in future will be cultivating commitment of knowledge workers to the organizational vision. As it becomes increasingly difficult to specify long-term goals and objectives, such commitment would facilitate real-time strategizing in accord with the organizational gasman and its real-time implementation on the front lines. Knowledge workers would need to take autonomous roles of self-leadership and self-regulation because they would be best positioned to sense the dynamic changes in their immediate business environment compliance will lose its effectiveness as the managerial tool of control as managers removed from the front lines would have less knowledge about the changing dynamics for efficient decision making. Managers would need to facilitate the confidence of knowledge workers in acting on incomplete information, trusting their own judgments, and taking decisive actions for capturing increasingly shorter windows of opportunity. In the new world of business, the control over employees will be ultimately self-imposed.

Management Control with Reference to Risk Management

In day today life manager and employees practice risk by making decision in different situations. Both in our personal life and business life our decisions are based on variety of factors. In business life risk management is not just a passing trend. It is dynamic and being driven by both governance issues and the demands of the citizens. Risk management

does not have to be complex. It can be tailored to meet the needs of the organization in its early stages and can be modified to the level of satisfaction and comfort as the process grows.

Managing risk is a systematic and proactive approach. This means that high risk exposure areas are to be understood, managed and controlled to an acceptable level of exposure so that the organization is properly protected to minimize negative consequences.

Risk specialists have traditionally focused mostly on important causes of risk such as weather, diseases and natural calamities and ways to deal with risk. Risk management has paid little attention to human resource calamities such as chronic illness of an employee, accidental death or impact of interpersonal relationship on business and families. But it is the fact that human resources affect most production, financial and marketing decisions.

The Human Resource Management / Risk Management Interface

Like risk, human resources are pervasive in the business. Human Resource Management is most effective when integrated with decision making throughout the business. This leads to recognition that such production, financial and marketing decision has a human component or influence. Which choice is to be made, how the decision is to be carried out, the follow up and monitoring depends on people. Isolating management team and employee issues from production, financial and marketing management frustrates people and creates unnecessary risk in business.

Human Resource Management is a process that can be broken down into specific activities: job analysis, writing job descriptions, hiring, orientation, training, employer/employee interactions, performance appraisal, compensation and discipline.

Human resource activities lead to four important implications for risk management.

First, these activities are necessary to keep human resources in harmony with the risk management tools adopted by the management

team. Risk management decisions are carried out by people. Placing the right people in right place, training, motivation and rewards are essential to success in risk management.

Second, human resource calamities, e.g., chronic illness, accidental death, interpersonal relationships can create risk in business. To avoid risk careful and appropriate risk management decisions are to be taken by risk specialists. Risk management should anticipate the likelihood of human resource calamities. Human resource contingency planning needs to be an internal part of the risk management.

Third, no management team stays together indefinitely. Every organization will eventually have different managers or be out of business. Management succession is a significant source of risk. Human resource considerations, plus legal and financial considerations, directly affect success in management succession and thus risk management.

Fourth, human resource performance evaluation should be tied to risk management. Risk management strategies are carried out through people. Human resource failures can cause the best planned risk management strategies to fail. Risk management depends on explicit duties being specified in manager's job descriptions, delegation of power and authority to manage risk following indicated guidelines, and responsibility at the action level or risk management.

Role of Managers in Risk Management

The effective integration of risk management and human resource management requires that managers have certain skills. Most important are: leadership, communication, training, motivation, conflict management and evaluation.

Leadership and control

Every human resource manager has responsibility of leadership. No group of people can come close to their goal without effective leadership. Planning, organizing, staffing, and controlling can substitute some extent of leadership. Delegation of authority and responsibility and other tools of empowering employees decrease the need of leadership. Motivation, trust,

and careful development of procedures and policies are also helpful. Still, leadership is necessary.

Communication

Communication is an essential skill for effective human resource management and risk control. In human resource management, clear messages, listening and use of feedback are especially important. Interpersonal relations, interviewing in hiring process, building rapport in the management team and with employees, orientation and training, performances appraisal, conflict resolution and discipline all requires in communication.

Training

Training helps people to learn. Effective training requires teaching skills, an understanding of how adults prefer to learn, practices, communication a systematic approach and evaluation of whether training has been effective.

Motivation

Motivation of employees challenges every manager. Employee motivation helps the organization to accomplish its goal and also helps workers to accomplish their career goals. The managers use a combination of understanding and satisfying employee needs, compensating fairly, making it possible for employees to do their jobs with minimum frustration and treating employees equitably. Overall it reduces the risk as well improve the effectiveness of the organization.

Conflict

Conflict is inevitable among employees, between employees and the management team and among management team. Managers must learn to deal with conflict rather than to avoid it. Conflict management strategies provide the management team positive steps for addressing the conflict. Effectiveness with the strategy is an essential skill for managing human resource as well as to risk control.

Evaluation

Most employees have keen desire for evaluation i.e. information about their performance. Many supervisors find it extremely difficult to share performance evaluation in a honest and helpful manner. Supervisors lacking evaluation skills combat their frustrations by postponement, inflated evaluations and vague communication. Both supervisors and employees need training in evaluation for making it pleasant for both parties.

People and risk are as integral to each other. Human resources must have careful attention if managers are to have a full understanding of their sources of risks and their alternatives for handling risks.

Lesson 4.3 - Differentiated Controls for Different Situations

Management control process is influenced by various factors in an organization. The various factors that determine the control systems are

1. Environment
2. Technology
3. Size of the Organization.

The control system is normally linked to strategy because

- Different organizations generally operate in different strategic contexts.
- Different strategies require different tasks priorities, key success factors, skills, perspectives and behaviour for effective execution
- Control systems are measurement systems that influence the behaviour of the people whose activities are being measured.
- Thus, a continuing concern in the design of control systems should be whether the behaviour induced by the system is consistent with the strategy.

Role of the Organization Structure

The size and structure of an organization influences the organization strategies and strategies influence the control systems. When an organization functions as single industry, then the top management, usually a Manager is responsible for developing strategy as well as control systems.

When the organization grows into a diversified industry it tends to change its strategy. The top management will now concentrate on the financial side of the industry and will delegate the development side to the next level of managers. Hence, the control systems dilutes and gets distributed, influenced by the factors of the business units. Basically, the

control system gets affected by the environment, location of the unit, technological factors etc.

The corporate level managers are less involved in business unit operations, the size of the conglomerate's corporate staff, compared to that of a same sized single industry firm, tends to be low.

Let us see the different factor levels affecting strategies and control systems with the base of organization structure in the following table.

Factors	Single industry	Diversified Industry
Familiarity of Top management to each unit	High	Low
Function of top management	In all areas including Marketing, R & D, Manufacturing and finance	Mainly finance
Decision making authority	Centralised	Decentralised
Corporate culture	Strong	Weak

Management Control

Any organization, however well aligned its structure is to the chosen strategy, cannot effectively implement its strategy without a consistent management control system. While organization structure defines the reporting relationships and the responsibilities and authorities of different managers, it needs an appropriately designed control system to function effectively.

When the organization structure gets wider and bigger, the experience and knowledge level of the top-level managers will not be sufficient enough to handle the diversified functions. Top-level managers for highly diversified firms cannot expect to control the different businesses on the basis of intimate knowledge of their activities, and performance evaluation tends to be carried out at arm's length.

Strategic planning

Given the low level of interdependencies, conglomerates tend to use vertical strategic planning systems – that is, business units prepare strategic plans and submit them to senior management to review and approve. Because of the high level of interdependencies, strategic planning systems for related diversified and single industry firms tend to both vertical and horizontal. The horizontal dimension might be incorporated into the strategic planning process in a number of different ways.

First, a group executive might be given the responsibility to develop a strategic plan for the group as a whole that explicitly identifies synergies across individual business units within the group.

Second, strategic plans of individual business units could have an interdependence section, in which the general manager of the business units identifies the focal linkages with other business units and how those linkages will be exploited.

Third, the corporate office could require joint strategies for interdependent business units. Finally, strategic plans of individual business units could be circulated to managers of similar business units to critique and review.

For example, NEC Corporation, a related diversified firm, adopted two planning systems: a normal business unit planning system and a corporate business plan system. Strategic plans in the Corporate Business plan system were prepared for important programs that cut across business units. It forced interdependent business unit managers to agree on a strategic plan for exploiting such linkages. In effect, the system required a special plan for important horizontal issues.

Budgeting

In a single industry firm, the chief executive officer may know the firm's operations intimately and corporate and business unit managers tend to have more frequent contact. Thus chief executives of single industry firms may be able to control the operations of subordinates through informal and personally oriented mechanisms, such as frequent personal

interactions. If so, this lessens the need to rely heavily on the budgeting system as the tool of control.

Transfer Pricing

Transfers of goods and services between business units are more frequent in single industry and related diversified firms than in conglomerates. The usual transfer pricing policy in a conglomerate is to give sourcing flexibility to business units and use arms-length market prices. However, in a single industry or a related diversified firm, synergies may be important.

Incentive Compensation

The incentive compensation policy tends to differ across corporate strategies in the following ways:

Formulae are used generally in big firms as top level managers usually are not familiar with the happenings in a variety of disparate businesses. They calculate incentive compensation as bonus on actual economic value added (EVA) in excess of budgeted EVA.

On the other hand, Managers of Single industry calculate compensation on subjective factors.

In diversified firms, the incentive bonus of the business unit managers is determined on the profitability of those units, rather than the profitability of the entire organization. This will motivate the unit managers and gives them a feeling that they are also owners of the units.

Competitive Advantage

A business unit can choose to compete either as a differentiated player or as a low-cost player. Choosing a differentiation approach, rather than a low-cost approach, increases uncertainty in a business unit's environment for the following three reasons.

1. Product innovation is more critical for differentiation business units. This is partly because a differentiation business unit focuses

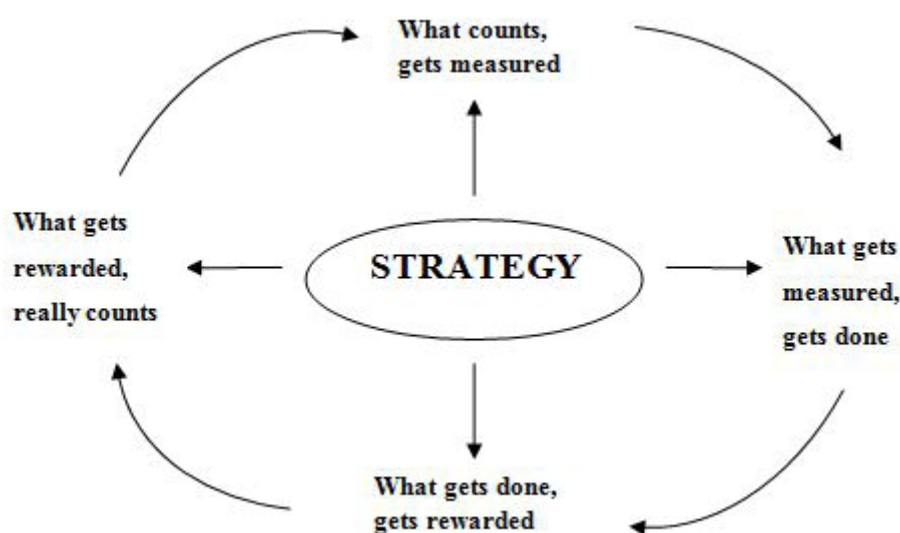
primarily on uniqueness and exclusivity, which require greater product innovation, whereas a low-cost business unit, with its primary emphasis on reducing cost, typically prefers to keep its product offerings stable over time. A business unit with greater emphasis on new product activities tends to face greater uncertainty, since the business unit is betting on unproven products.

2. Smaller firms have narrow product lines to minimize the inventory carry costs. Differentiated business units, on the other hand, tend to have broader set of products to create uniqueness. Product breadth creates high environmental complexity and higher uncertainty.
3. Smaller units succeed with their products as they are priced lower.

Performance Measurement Systems

The goal of performance measurement system is to implement strategy. In setting up such systems, a senior management selects measures that best represent the company's strategy. These measures can be seen as current and future critical success factors; if they are improved, the company has implemented its strategy. The strategy success depends on its soundness. A performance measurement system is simply a mechanism that improves the likelihood the organization will implement its strategy successfully.

The following figure gives the frame work for designing a performance measurement system.



Framework for Designing Performance Measurement System

Source: *This chart was suggested by Craig Schnier*

A performance measurement system attempts to address the needs of the different stakeholders of the organization by creating a blend of strategic measures; outcome and driver measures, financial and non financial measures, and internal and external measures.

Outcome and Driver Measures

Outcome measurement indicates the result of a strategy (e.g. increased revenue). These measures typically are “lagging indicators”; they tell management what has happened. By contrast, driver measures are, “leading indicators”; they show the progress of key areas in implementing a strategy. Cycle time is an example of a driver. Whereas outcome measures indicate only the final result, driver measures can be used at a lower level and indicate incremental changes that will ultimately affect the outcome. By focusing management attention on key aspects of the business, driver measures affect behavior in the organization. If a business unit’s desire is to improve time-to-market, focusing on cycle time allows management to track how well this goal is being achieved, which, in turn, encourages employees to improve this particular measure.

Outcome and driver measures are inextricably linked. If outcome measures indicate there is a problem but the driver measures indicate the strategy is being implemented well, there is a high chance that the strategy needs to be changed.

Financial and Non financial Measures

Organizations have developed very sophisticated systems to measure financial performance. Unfortunately, as many U.S. firms discovered, during the 1980s industries were being driven by changes in non-financial areas, such as quality and customer satisfaction, that eventually impacted company’s financial performance.

Even though they recognize the importance of non financial measures, many organizations have failed to incorporate them in to their executive-level performance reviews because these measures tend to be much less sophisticated than financial measures and senior management is less adept at using them.

Internal and External Measures

Companies must strike a balance between external measures, such as customer satisfaction, and measures of internal business processes, such as manufacturing yields. Too often companies sacrifice internal development for external results or ignore external results together, mistakenly believing that good internal measures are sufficient.

Measurements Drive Change

The most important aspect of the performance measurement system is its ability to measure outcomes and drivers in a way that causes the organization to act in accordance with its strategies. The organization achieves goal congruence by linking overall financial and strategic objectives with lower-level objectives that can be observed and affected at different organizational levels. With these measures, all employees can understand how their actions impact the company's strategy.

Key Success Factors

Customer-Focused Key Variables

The following key variables focus on the customer:

- **Bookings:** In most business units, some aspect of sales volume is a key variable. Ideally, this is sales orders booked, since unexpected changes in this variable can have future repercussions throughout the business. Because bookings precede sales revenue, this is a better indicator than sales revenue itself. A decrease in this variable signals that adjustments to marketing activities may be warranted—in the hope of increasing sales or production activities or both—to change operating levels.
- **Book orders:** An indication of an imbalance between sales and production, back orders can suggest customer dissatisfaction.
- **Market share:** Unless the market share is watched closely, deterioration in the unit's competitive position can be obscured by reported increases in sales volume that result from overall industry growth.

- **Key account orders:** In business units that sell to retailers, the orders received from certain important accounts-large departmental stores, discount chains, supermarkets, mail-order houses-may indicate early the entire marketing strategy's success.
- **Customer satisfaction:** This can be measured by customer surveys, "mystery shopper" approaches, and number of complaint letters.
- **Customer retention:** This can be measured by the length of customer relationships.
- **Customer loyalty:** This can be measured in terms of repeat purchases, customer referrals, and sales to the customer as a percentage of the customer's total requirements for the same product or service.

Key Variables Related to Internal Business Processes

The following key variables to internal business processes:

- **Capacity utilization:** Capacity utilization rates are especially important in businesses in which fixed costs are high (e.g., paper, steel, aluminum manufacture). Similarly, in a professional organization, the percentage of the total available professional hours that is billed to clients-sold-time is a measure of fixed-resource utilization. In a hotel, the [percentage of rooms occupied each day-occupancy rate-is the capacity utilization measure.
- **On-time delivery.**
- **Inventory turnover.**
- **Quality:** Indicators of quality include the number of defective units delivered by each supplier, number and frequency of late deliveries, number of parts in a product, percentage yields, scrap, rework, machine breakdowns, number of customer complaint, level of customer satisfaction, warranty claims, field service expenses, and so on.
- **Cycle time:** This equation for cycle time is a tool used to analyze inventory requirements.

$$\text{Cycle time} = \text{processing time} + \text{storage time} + \text{movement time} + \text{Inspection time}$$

Implementing a Performance Measurement System

Implementation of a performance measurement system involves four general steps:

1. Define strategy.
2. Define measured of strategy.
3. Integrate measures into the management system.
4. Review measures and results frequently.

Each of these steps is iterative, requiring the participation of senior executives and employees throughout the organization. Though the controller may be responsible for overseeing its development; it is a task for the entire management team.

Define Strategy

The scorecard builds a link between strategy and operational action. Therefore, the process of defining a scorecard begins by defining the organization's strategy. In this phase, it is important that the organization's goals are explicit and that targets have been developed.

Define Measures of Strategy

The next step is to develop measures to support the articulated strategy. The organization must focus on a few critical measures at this point or management will be overloaded with measures. Also, it is important that the individual measures be linked with each other in a cause-effect manner.

Integrate Measures into the Management System

The scorecard must be integrated with the organization's formal and informal structures, culture, and human resource practices. For instance, the effectiveness of scorecard will be compromised if managers' compensation is based only on financial performance.

Review Measures and Results Frequently

Once the scorecard is up and running, it must be consistently and continually reviewed by senior management. The organization should look for the following:

- How is the organization doing according to the outcome measures?
- How is the organization doing according to the driver measures?
- How has the organization's strategy changed since the last review?
- How have the scorecard measure changed?

The most important aspects of these reviews are as follows:

- They tell management whether the strategy is being implemented correctly and how successfully it is working.
- They show that management is serious about the importance of these measures.
- They keep measures aligned to ever-changing strategies.
- They improve measurement.

A performance measurement system provides a mechanism for linking strategy action. It operates in the assumption that financial measures alone are not sufficient to operate an organization and that special attention must be placed on developing sophisticated, non financial measures. The primary role of management controls is to help execute chosen strategies. In industries that are subject to very rapid environmental change, management control information can also provide managers with a tool for thinking about new strategies; this is called interactive control. Interactive controls are not a separate system but an integral part of the management control system.

Balanced Score Card

Concept of Balanced Score Card

Balanced Score Card is a comprehensive performance measurement framework that translates an organisation's strategy into clear objectives, measures, targets and initiative. It represents management system that can motivate breakthrough improvement critical areas of product, process,

customer and market development. It integrates the measures used across the organization and helps it to grapple with the intangible or intellectual assets.

The Balanced Score Card is a management system that enables organizations to clarify their vision and strategy and translates them in to action. Kaplan and Norton describe the innovation of the balance score card as follows:

“The balanced score card retains traditional financial measures. But financial measures tell the story of past events, an adequate storey of industrial age companies for which investments in long-term capabilities and customer relationship were not critical for success. These financial measures are inadequate, however, for guiding and evaluating the journey that information age companies must make to create future value through investment in customers, suppliers, employees, processes, technology, and innovation.”

It proves effective because the variables measures through this tool are grounded in the organization’s strategic objectives and competitive demands. By narrowing down the critical indicators within four parameters the scorecard helps organizations to have a strategic vision.

It helps in communicating the multiple, linked objectives that companies must achieve to compete on the basis of capabilities and innovation and not just tangible physical assets.

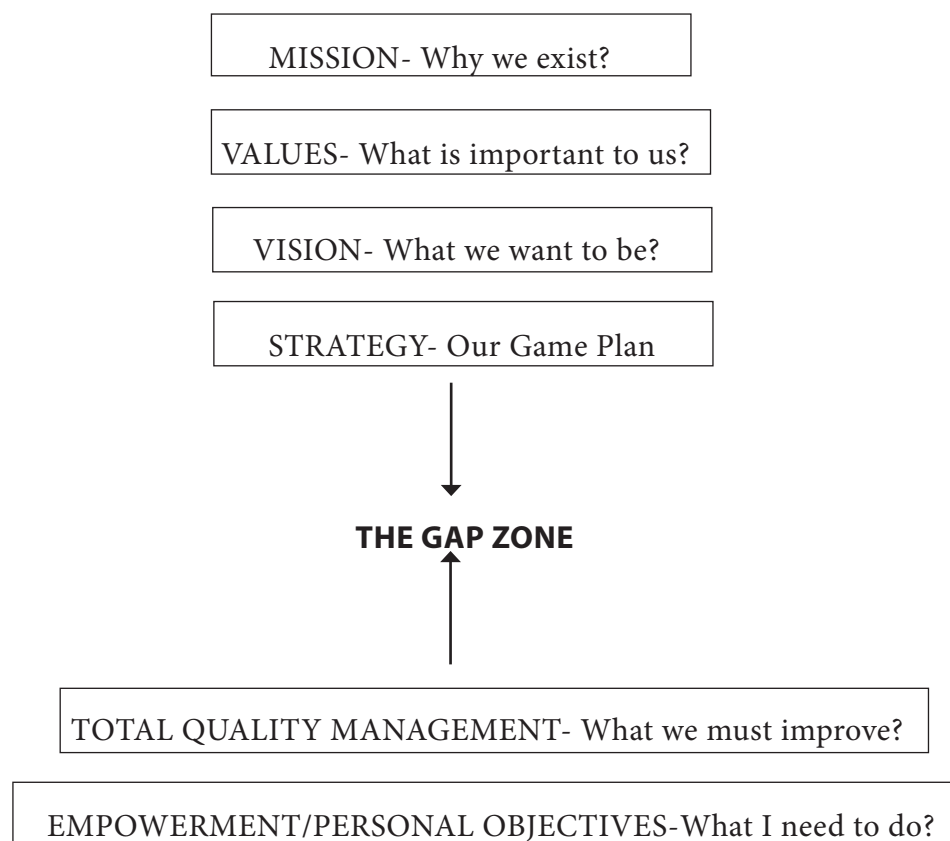
David Chaudron in his article, ‘Using the balanced scorecard to combine viewpoints of Company’s successes defines Balanced Scorecard as

- A way of Measuring organizational, business unit or department success
- A way of Balancing long-term and short-term actions
- A way of Balancing different measures of success such as: Financial, Customer, Internal Operations and Human Resource Systems & Development
- A way of trying strategy to measure to action

In short, Balanced Scorecard is a business management concept that transforms both financial and non-financial data into a detailed roadmap, that helps an enterprise measure performance and meet both short and long-term objectives. It provides feedback about both the internal business process and external outcomes in order to continuously improve strategic performance and results. When full deployed, the balance scorecard transforms strategic planning from an academic exercise into the nerve centre of an enterprise.

Need For Balanced Scorecard

The need for balanced scorecard arises from the fact that there is a gap that exists between the mission, vision, strategy and the actions initiated by employees on a daily basis. This can be depicted with the help of the following figure:



Gap between Mission- Vision- Strategies- Employees' Everyday Actions

Structure of Balanced score card

Traditional performance measurement, focusing on external accounting data, has become obsolete and something more was needed to

provide modern enterprises with efficient planning tools. With this need in mind BSC was developed as a conceptual framework for translating an organization's vision into a set of performance indicators, distributed among four perspectives viz. Financial, Customer, International Business Processes, and Learning and Growth.

These indicators facilitate measurement of an organization's progress toward achieving its vision and identifying the long-term drivers of success. Through the BSC, an organization can monitor both its current performance and its efforts to improve processes, motivate and educate employees, and enhance the information system that determines the ability to learn and improve.

Each of the above mentioned perspective aims at establishing a balance with other perspectives. These perspectives include:

- Financial Perspective (How Do We Perceive Our Share Holders?)
- Customer Perspective (How Do We Perceive Our Customers?)
- Process Perspective (In What Process Should We Excel To Succeed?)
- Learning And Innovation Perspective (How Will We Sustain Our Ability To Change And Improve?)

Benefits of Balanced Scorecard

(a) Alignment of strategy with key performance objectives at all levels of the organization:

Most of the organizations fail to align their strategy at different levels of the organization. The result is an organization that is not operating at maximum efficiency, typically leading to less than optimal performance as well as missed opportunities. With a Balanced Scorecard, the corporation, down to each organizational unit and even to the individual level, can understand the key performance indicators that they have control of and responsibility for and understand the relationship to the overall success of their organization.

(b) *Measuring and managing business performance effectively*

The balanced scorecard provides management with visibility into operations and issues of all business units and enables them to easily monitor and understand how organizations are progressing against plan. However, a truly effective scorecard also goes a step further and enables organizations to implement and track key initiatives for addressing problems areas or pursuing business opportunities. By having visibility across organizations, a senior management can also provide more visibility across organizations, and when appropriate, more effectively cross-utilize resources.

(c) *Strategic feedback*

Balanced Scorecard that has been deployed across the enterprise offers the divisional units an unsurpassed communication platform for feedback and information sharing. Often looked upon as “the strategic knowledge management system” within an organization, a scorecard focuses on proactive communication for addressing problems early and pursuing business opportunities faster and more effectively than traditional management models.

(d) *Maximising the overall IT investment*

Most organizations have significant investments in data warehouses, data marts as well as OLTP and ERP systems, such as SAP, people soft and Baan. These back-office systems are the primary sources of data collected within an enterpriser. A balance scorecard, as the strategic analytical application within an organization, should work in harmony with existing sources of data, extracting and packaging this information and sharing it as part of the scorecard.

(e) *Double-Loop Feedback*

In traditional industrial activity, “quality control” and “zero defects” were the watchwords. In order to shield the customer from receiving poor quality products, aggressive efforts were focused on inspection and testing at the end of the production line./ The problem with this approach is that the true causes of defects could never be identified, and there would always

be inefficiencies due to the rejection of defects. Deming had concluded that variation is created at every step in a production process, and the causes of variation need to be identified and fixed. In this can be done, then there is a way to reduce the defects and improve product quality indefinitely. To establish such a process, Deming emphasized that all business process should be part of a system with feedback loops. The feedback data should be examined by managers to determine the cause of variation, what are the processes with significant problems, and then they can focus attention on fixing that subset of processes.

The balanced scorecard incorporates feedback around internal business process outputs' as in TQM, but also adds a feedback loop around the outcomes of business strategies. This creates a "double-loop feedback" process in the balanced scorecard.

(e) Outcome Metrics

It is rightly said, "You can't improve what you can't measure". So organizations need to develop basis for measuring the strategic plan. The measurement tool should provide information on the key business drivers and variables that managers need to watch. Managers have to then evolve processes to collect information relevant to these metrics and reduce it to numerical form for storage, display, and analysis. Decision makers examine the outcomes of various measured processes and strategies and track the results to guide the company and provide feedback.

Thus the value of tools measurement lies in their ability to provide a factual basis for defining:

- Strategic feedback to show the present status of the organization
- Diagnostic feedback into various processes to guide improvements on a continuous basis.
- Trends in performance over time
- Feedback
- Quantitative inputs to forecasting methods and models for decision support systems

Self Assessment Questions

1. Explain the behavioural aspects of Control.
2. How you think motivation can help the Management control system?
3. Explain in brief Knowledge Management Control System.
4. What is risk management and what are the roles of a Manager in risk control?
5. Explain Human Resource Accounting with the methods for measuring HRA
6. Explain the key success factors for measuring performance
7. How you justify the importance of participative management in a control system?
8. What are the benefits of Balanced score cards?

CASE STUDY

Mr.Kamal Nayan joined a Office Manager, Industrial Products Limited, Mumbai after coming back from U.S.A. from where he got his M.B.A. degree with specialization in personnel management. He was young and energetic and believed in results. Before proceeding to U.S.A., he had several years of experience in India in different capacities. When Mr. Nayan joined Industrial Products Limited, its office time was 10.30 A.M. to 5.30 P.M. He felt that the timing should be changed to 10.00 A.M. to 5.00 P.M. because he knew that office personnel in U.S.A. did not work after 5.00 P.M. He thought this to be true for India also and to ensure more availability of effective time for office: he changed it to 10.00 A.M. to 5.00 P.M.. He announced the change officially,

No one reacted initially but after two days, Mr.Nayan received a written memorandum by all office personnel that old office timing be restored. Mr.Nayan did not yield to this demand. However, he was convinced that the first step was to build co-operative spirit among his employees through informational get together. Therefore, he prepared a scheme of having monthly dinner party of all members of the office. In the party, all members were to bring their home-made dishes. Their wives and

children were to be encouraged to attend the monthly dinner party. The scheme was announced through placing it on the information bulletin of the company. The notice also invited suggestions from the members for making the scheme successful. Two weeks elapsed and no suggestion came, On one occasion when the day was nearing for the first dinner meeting, he overheard the following conversation between two of his office members.

First employee: “So, what are you bringing for the party ? As for myself, I will bring Bhelpuri”.

Second employee: “I will bring Chana”. (Both laughed)

Mr.Nayan felt that nobody seemed to be concerned in his scheme.

Questions

- (a) What were the reasons for not supporting the actions of Mr.Kamal Nayan by his employees ?
- (b) Advise Mr.Kamal Nayan how he should proceed in the matter.

UNIT - V

Learning Objectives

After studying this unit you should be able to understand

- The management control process in service organisations
- Controlling the financial sector and Banking sector
- ABC costing, insurance accounts and non-profit organisation
- Public service organisation, government and co-operative business
- The process of designing controlling system

Unit Structure

Lesson – 5.1 – Management control in specialized organisations –
Sectoral Applications

Lesson – 5.2 - Process of designing controlling system

Lesson 5.1 - Management Control in Specialized Organisations - Sectoral Applications

I. Service Organisations

Early in the 20th century, employment in the service sector overtook employment in the manufacturing sector. By 2005, service sector employment had grown to more than twice that of manufacturing.

Characteristics of Service Organisations

Management control in service industries is different from management control in manufacturing companies. The factors which apply to the management control of legal, research and development, and other service department in companies generally are discussed below.

1. Absence of Inventory Buffer

Goods can be held in inventory, which is a buffer that dampens the impact on production activity of fluctuations in sales volume. Services cannot be stored. The airplane seat, hotel room, hospital operating room, or the hours of lawyers, physicians, scientists, and other professionals that are not used today are gone forever. Thus although a manufacturing company can earn revenue in the future from products that are on hand today, a service company cannot do so. It must try to minimize its unused capacity. Moreover, the costs of many service organisations are essentially fixed in the short run.

For example, in the short run, a hotel cannot reduce its costs substantially by closing off some of its rooms. A key variable, therefore, in most service organisations is the extent to which current capacity is matched with demand.

2. Difficulty in Controlling Quality

A manufacturing company can inspect its products before they are shipped to the consumer, and their quality can be measured visually or with instruments. A service company cannot judge product quality until the moment the service is rendered, and then the judgements are often subjective. Restaurant management can examine the food in the kitchen, but customer satisfaction also depends on the way it is served.

3. Labour Intensive

Manufacturing companies add equipment and automate production lines, thereby replacing labour and reducing costs. Most service companies are labour intensive and cannot do this.

4. Multi-Unit Organisations

Some service organisations operate many units in various locations, each unit relatively small. These organisations are fast-food restaurant chains, auto rental companies, gasoline service stations, and many others. The information for each unit can be compared with system wide or regional averages, and high performers and low performers can be identified.

5. Historical Development

Cost accounting started in manufacturing companies because of the need to value inventories. Standard cost systems, separation of fixed and variable costs, and analysis of variances were built on the foundations of cost accounting systems. Until a few decades ago, most texts on cost accounting dealt only with practices of manufacturing companies.

II. Professional Service Organisations

Research and development organisations, law firms, accounting firms, health care organisations, engineering firms, architectural firms, consulting firms, advertising agencies, symphony and other arts firms and sports firms are examples of professional service organisations.

Special Characteristics

1. Goals

These organisations have relatively few tangible assets; its principal asset is the skill of its professional staff, which doesn't appear on its balance sheet. Their financial goal is to provide adequate compensation to the professionals.

2. Professionals

Professional organisations are labour intensive, and the labour is of a special type. Professionals who are also managers tend to work only part time on management activities. They give inadequate importance to the financial implications of their decisions which affect the attitude of support staffs and non professionals which in turn leads to inadequate cost control.

3. Output and Input Measurement

The output of a professional organisation cannot be measured in physical terms, such as units, tons, or gallons. Revenues earned is one measure of output in some professional organisations, but these monetary amounts relate to the quantity of services rendered, not their quality. Furthermore, the work done by many professionals is non repetitive. This makes it difficult to plan the time required for a task, to set reasonable standards for task performance, and judge how satisfactory the performance was.

4. Small Size

With a few exceptions, such as some law firms and accounting firms, professional organisations are relatively small and operate at a single location. Senior management in such organisations can personally observe what is going on and personally motivate employees. Even a small organisation needs a budget, a regular comparison of performance against budget, and a way of relating compensation to performance.

5. Marketing

In professional organisation, the ethical code limits the amount and character of overt marketing efforts by professionals. Since marketing is an essential activity, if it can't be conducted openly, it takes the form of personal contacts, speeches, articles, etc. These marketing activities are conducted by professionals who spend their time mostly in production work, i.e., working for clients.

Management Control Systems

1. Pricing

The selling price of work is set in a traditional way in many professional firms. If the profession is one in which members are accustomed to keeping track of their time, fees generally are related to professional time spent on the engagement. The hourly billing rate is based on the compensation of the grade of the professional, plus a loading for overhead costs and profit. In other professions, such as investment banking, the fee typically is based on the monetary size of the security issue. In some others, there is fixed price for the project. Prices vary widely among professions; they are relatively low for research scientists and relatively high for accountants and physicians.

2. Profit Centres and Transfer Pricing

Support units, such as maintenance, information processing, transportation, telecommunication, printing, and procurement of material and services, charge consuming units for their services.

3. Strategic Planning and Budgeting

In general, formal strategic planning systems are not as well developed in professional organisations as in manufacturing companies. Partly it is because professional organisations have no great need for such systems. The principal assets are people. The strategic plan of a professional organisation typically consists primarily of a long range staffing plan, rather than a full-blown plan for all aspects of the firm's operation.

4. Control of Operations

Much attention is given to scheduling the time of professionals. The billed time ratio, which is the ratio of hours billed to total professional hours available, is watched closely. If engagements are billed at lower than normal rates, the resulting price variance warrants close attention. When the work is done by project teams, control is focused on projects. A written plan for each project is needed, and timely reports should be prepared that compare actual performance with planned performance in terms of cost, schedule and quality.

5. Performance Measurement and Appraisal

At the extremes the performance of professionals is easy to judge. Appraisal of the large percentage of professional who are within the extremes is much more difficult. For more professions, objective measures of performance are sometimes available. The recommendations of an investment analyst can be compared with actual market behaviour of the securities; the accuracy of a surgeon's diagnosis can be verified by an examination of the tissue that was removed and the doctors' skill can be measured by the success ratio of operations.

These measures are, of course, subject to appropriate qualifications, and in most circumstances the assessment of performance is finally a matter of human judgement by superiors, peers, self, subordinates, and clients.

III. Financial Service Organisations

Financial Service organisations include commercial bank and thrift institutions, insurance companies, non-banking financial institutions, mutual funds and securities firms. These companies are in business primarily to manage money. Some act as intermediaries (obtain money from depositors and lend it to individuals), some act as risk shifters (obtain money in the form of premiums, invest these them and accept the risk of occurrence of specific events) and still others as traders (buy and sell securities, either for their own account or for customers).

General observations about the financial services sector are:

- Financial services firms accounted a major portion of the gross domestic product and constitute an important backbone to the economy.
- Blurring of industry boundaries, globalization, and consolidation of financial services firms will accelerate in the 21st century.
- Financial services firms have used the information technology revolution to innovate new products and discover new methods of trading.
- The need for controls in the financial services sector has become paramount due to highly risky and bad loans which have lead to collapse of banks in the past.
- New forms of financial instruments such as derivatives designed by financial services firms sometimes resulted in millions of dollars of losses for their clients.

Special Characteristics

The general principles and concepts of management control systems applied must be adapted to the following special characteristics of this industry.

1. Monetary Assets

Most of the assets of financial service firms are monetary. The current value of monetary assets is much more easily measured than the value of plant and other physical assets. Currency is the extreme example of a fungible commodity. At any time, rupees held by all companies have the same value, even though the purchasing power changes with time. Financial assets also can be transferred from one owner to another easily and quickly. In an electronic funds transfer, money moves almost instantaneously.

2. Time Period for Transactions

The ultimate financial success or failure of a loan or a security issue may not be known for 30 years or more. During this period, the soundness

of the loan as well as the purchasing power of money will change. So, it means performance of financial personnel cannot be measured at the time the initial decision is made. It also means that control should be in the form of continued surveillance of the soundness of the transaction during its life.

3. Risk and Reward

Many financial services firms are in the business of accepting risks in return for rewards. Most business decisions involve a trade-off between risks and rewards. The greater the risk, the greater should be the anticipated reward. Interest rates on loans and premiums on insurance policies are based on assumptions about risk that may or may not turn out to be accurate.

4. Technology

Technology has revolutionized the financial services industry. Financial service firms have used information technology as a way to offer innovative services. The Automated Teller Machines of banks, electronic marketing of products and services through internet, cyber-payment systems and online brokerage services are such innovative examples.

Controlling the Financial Sector

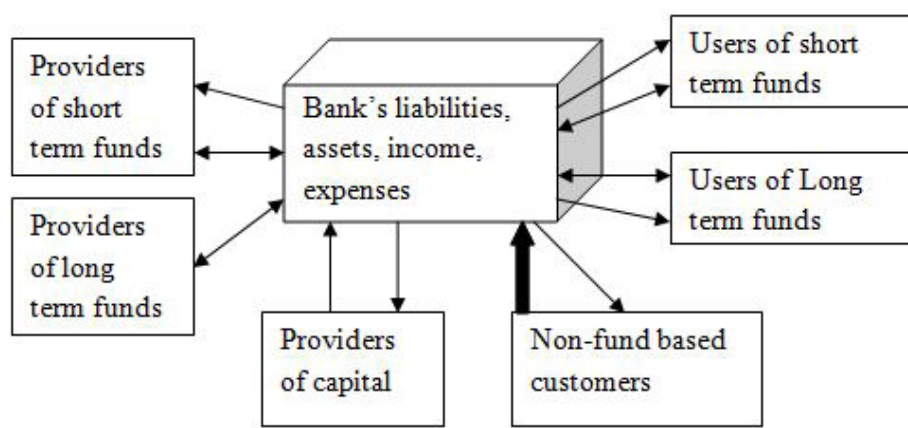
These industries are severely controlled by legislation, as there is an understanding that neither of the two types of controls, - those internal to the organisations which is called as hierarchies, or the controls of markets, would be adequate to ensure that organisations perform up to the expectations of society. Nor are the problems of the finance sector fully captured by the concept of either the single or the dual focus of controls. The sector has been one of the most vulnerable, and like the keg of gunpowder, ever ready to explode. Trust is the key word for control systems in this sector. The locus of controls in the finance sector lies largely outside the organisation. They are heavily circumscribed by regulations made by the state. Even so, the sustainability of the sector has to rely on the cultivation of trust within the organisation and its relationship with the outside world. The organisation has also to make it feasible for hierarchical

and market controls operate within the organisation, within an acceptable level of transaction costs.

The Banking Sector

Logical consequence of Flow of Transactions

The first step in constructing a management control system for an industry is to understand the skeleton of their flow of transactions. The flow chart is given in diagram below.



The Flow Chart of the Banking Industry

Flow of funds \longleftrightarrow in return of interest. Providing service \longrightarrow
 Providing income for service rendered \longrightarrow
 Providing funds \longrightarrow in return of dividend \longrightarrow

The peculiarity in the banking sector is that the providers of capital provide usually a much smaller proportion of the total fund of the banks.

The Balance Sheet Concept

Definition: A Balance Sheet is a statement of the financial position of a business which states the assets, liabilities, and owners' equity at a particular point in time. In other words, the Balance Sheet illustrates business's net worth.

It is a statement of the total assets and liabilities of an organization at a particular date, usually the last day of the accounting period. The first part of the statement lists the fixed and current assets and the liabilities, the second part shows how they have been financed; the totals for each part must be equal.

All accounts in the General Ledger are categorized as an asset, a liability or equity. The relationship between them is expressed in this equation: $\text{Assets} = \text{Liabilities} + \text{Equity}$. The Balance Sheet is divided into these three sections. It is also known as Statement of financial position.

Activity Based Costing (ABC)

Introduction

ABC was developed as a continuous improvement initiative of the accounting information system. Original, ABC was used as a product costing methodology, but is now being used as a cost management tool in many different functions of business. A couple of differences between ABC and traditional cost systems are 1) costs are traced to cost objects by identifying cost drivers and 2) costs are traced on the basis of the structural or hierarchical level at which costs are incurred. Therefore, ABC provides more accurate cost estimates of the product or service and the corresponding activities than traditional costing.

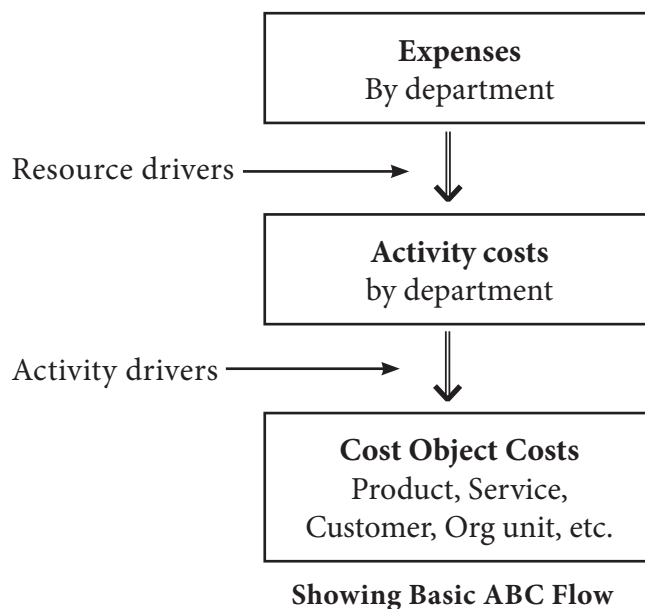
It is important to note that in traditional costing the assumption is that products consume resources. ABC contrasts traditional costing by assuming that products consume activities and activities consume resources. Once the product or service activities are identified, costs are allocated to the product or service according to the amount incurred by those activities. This method of allocating costs provides a benefit for making decisions regarding different types of profitability and project accounting.

There are two sets of costs related to the accuracy of ABC cost information, 1) cost of measurement and 2) cost of decision error. As the accuracy of measurement goes down the cost of decision error goes up. Detail is an important factor in the success of a ABC system, but the detail must be value add. It is important to control changes brought on

by environmental factors (competition, volatility, profit margins, etc...) while still allowing for diversity throughout the life cycle of the product or service. So how can one ensure accuracy in measurements for better decision making? The key is to identify and analyze the most optimal cost drivers that trace the costs of the activities back to the product or service.

Activity Identification & Analysis in Activity Based Costing (ABC)

Cost drivers are linked to business process mapping and activity analysis in order to obtain rigid data for measurement analysis. Diagram depicts a two stage process **that traces expenses through activities to cost objects.**



The first stage traces expenses from the department or organizational level budget to activities that are assigned to resources (labor, space, materials, and suppliers). For example, a labor resource is allocated to an activity at 100% over a duration of time equating to a unit of work converted to an activity cost. In the second stage, activity costs are traced through the activity cost drivers to the cost objects, i.e. products and/or services. This stage is concerned with explaining the causes of work and what things cost. Managers that focus on process drivers and cost drivers have a more detailed understanding of activity costs and associated activity dependencies. Therefore, managers can make better decisions on areas in need for process improvement instead of shooting from the hip.

ABC provides a hierarchical structure of detail. The challenge for managers is to ensure an optimal amount of detail that achieves balance and accuracy.

Activity Based Costing (ABC) - Cost Driver Optimization

Managers chose cost drivers for planning and control purposes. Choosing too many cost drivers and the system is bogged down creating extra costs and inefficiency problems. Managers must strive to strike a balance between accuracy benefits and costs of data management. An optimal number of cost drivers generally discriminates and captures most of the incurred costs, and identify a priority order that specifies which low-priority and relatively insignificant activities will be combined to save costs without sacrificing much accuracy.

Use of ABC Information

ABC may provide useful insights. For example, it may show that complex products with many separate parts have higher design and production costs than simpler products, that products with low volume have higher unit costs than high-volume products, that products with many setups or many engineering change orders have higher unit costs than other products.

Information on the magnitude of these differences may lead to changes in policies relating to full-line versus focused product line, product pricing, make-or-buy decisions, product mix decisions, adding or deleting products, elimination of non-value-added activities, and to an emphasis on better factory layouts and simplicity in product design.

Examples. In 1992, Chrysler benefited from ABC analysis in a pilot project that examined the designs for wiring harnesses for the company's popular minivans. The harnesses yoke together bundles of wires. Nine departments, from design to assembly to finance, set out to reckon the optimum number of wiring harnesses. The assembly people favored using just one kind of harness; the design group wanted nine, and so on. When ABC was used to cost out activities across the entire production of the vehicles, everyone saw the optimum number was two.

Hewlett-Packard's successful products, new models of HP 3000 and HP 9000 midrange computers, benefited from better cost information. When ABC showed that testing new designs and parts was extremely expensive, engineers changed their plans to favor components that require less testing, thus lowering costs.

By investing \$100,000 and six months in its ABC implementation program, the Naval Air Depot in Jacksonville, Florida, saved about \$200 million annually. Through utilization of ABC, the distance that aircraft parts were moved around was reduced by 80 percent, total number of steps was reduced by 91 percent, and total change in task ownership was reduced by 92 percent.

Other companies have realized significant cost savings as a result of reduced complexity.

Examples. Procter & Gamble had standardized product formulas and packages. P&G used just two basic packages for shampoo in the United States, saving \$25 million a year.

General Motors had reduced the number of U.S. car models from 53 to 44 and combined its Pontiac and GMC division to simplify marketing.

IV. Insurance Industry Overview

Insurance is a contract binding an insurance company to compensate a beneficiary for the loss of life or loss or damage to property of a person insured. Benefits accrue due to an individual due to statutory obligation of the benefit provider to compensate for the expenses involved in health care, retirement plans of the beneficiaries by entering into a contract with the provider either singly or in groups by paying a predetermined premium at predetermined intervals.

The process of Insurance and Benefit Management Business can be grouped under three main categories and shown in diagram 3. These are Products, Processes and People.

The processes involved in Insurance and Benefits Management Business are described below:

- a) Publicity and Promotion of Products.
- b) Product Evaluation.
- c) Enrolment of Beneficiaries for the Plans.
- d) Receipts and Accounting of Premiums.
- e) Processing and Settlement of Claims.
- f) Payments Processing and Settlement of Accounts with Vendors.
- g) Payments Processing and Settlement of accounts with Agents/ Brokers.
- h) Routine and Exception Reporting for Management Control.
- i) Customer Relations Management with Beneficiaries and Vendors.
- j) Accounting and Audit.
- k) System Administration.



Processes involved in Insurance and Benefits Management Business

A. Publicity and Promotion of Products

1. Insurance and Benefit Product Vendors offer Perennial as well as Plan Year Based Products.
2. The Promotional Materials including Application Forms for Perennial Products should be made available on the Client's Website.
3. Upon requests from individual, the CRM staff should be capable of dispatching hard copies by Surface Mail.
4. Insurance Agents also canvass for Products and their management for a specified Commission amount. The details of Agents are held in the database.
5. Insurance and Benefit Vendors also promote their Products through brokers for Corporate Clients on a specified brokerage. The details of brokers and Corporate Client Information are to be stored in the database.
6. For the Year Based Benefit Plans, the Promotional Materials and Application Forms are obtained from Vendors in advance and dispatched prior to the beginning of Plan Year. Corporate Client may employ its own representative or use the services of Broker or Agent for bulk enrolment. The materials are dispatched either through Bulk Email or by Surface mail as convenient to the Client. For the Individuals and Groups who wish to enrol or continue for the Year Based Benefit plans the promotional materials and application Forms are sent as per their requirement.
7. Enrolment Management Staff is responsible for collection and dispatch of promotional materials, maintenance of the concerned web page(s), receipt and approval of Applications, maintenance of master data of Plans.

B. Product Evaluation

1. The selection of Products for promotion and management depends on the business yield, the popularity of the Product with benefits, the reliability of Vendors, and the business relationship with the Vendors, legal and statutory requirements.

2. To have an objective analysis of the Products, the Program will be using statistical tools to analyze the data on Plans, Premiums, Claims, Revenue Flows and Revenue earned.
3. To gauge the relative effectiveness of the Vendors, the lead-time for Claims Adjustment, Rejections, Net Rebate Earned, the total number of beneficiaries will be given by the program
4. The Enrolment Management will select the appropriate Vendors and Products in the best interest of the business and Clients for promotion.

C. Enrollment of Beneficiaries for the Plan

1. Applications for Enrolment in the Insurance / Benefit Plans will be obtained through:
 - a. Internet
 - b. Surface Mail
 - c. Bulk enrolment through:
 - i. Brokers
 - ii. Agents
 - iii. TPA's
 - d. Client Representative.
 - e. Its Own Representative.
2. The data will be entered individually, where needed and validated through validation program for accuracy and completeness.
3. The approved list will update in the Master list of affected tables.
4. The rejected list will be sent to the applicant / the forwarding agency for resubmission or rejection.
5. Where the applications are received through Internet a confirmation letter will be sent to the Applicant on hard copy for his /her authentication and return. The Plan becomes effective only after the receipt of the signed copy.

D. Receipts & Accounting of Premium

1. Premium may be received from Individual Beneficiary through Check, Demand Drafts, Money Order, Pay Order or Credit or Debit Card Authorization.
2. Corporate Clients may send the details of Premium Cutting as a separate file or as part of their combined Pay Roll.
3. Groups may send their Premium Payments through a separate file.
4. There will be a necessity to Import the above into the master files of the legacy database as each Client/ Group may have their own established data formats.
5. Import definitions for each of the Clients / Groups should be customized.
6. The Imported data will be reconciled for short, missing, invalid or overpayment against actual due and the Client notified accordingly.
7. After reconciliation, the premium payment will update individual running ledger entry.

E. Processing and Settlement of Claims

1. Individuals prefer Claims against Products.
2. These are required to be settled by the Carriers as per the entitlement.
3. Claims are validated by Program as well as by the Claims Staff who are trained Claims Settlers.
4. The Program does the validation for Effectiveness of the Claim, limits of liability.
5. The Settlers verify authenticity of the Beneficiary and the supporting documents. In case of Life, Property and Vehicle Insurance legal documents may be required to authenticate the claim and the claimant.
6. Once the Claim is processed, it is passed for Payment or Rejected.
7. The Payment Order would be generated and sent to the Beneficiary or the Rejection slip with reasons.

F. Payments Processing and Settlement of Accounts with Vendors

1. The records should be updated and prefer a claim on the Vendor. Based on the business relationship with the Vendor, reimbursement of the Claims passed will be by book adjustment against Vendor Payment or Imprest Account.
2. Then generate Payment advice, Payment Orders and Control Reports as per the needs of the management as well as Vendors.
3. Similarly when Premium Payments are received from Individuals, Groups and Corporate Clients by Carriers, the Processing Staff will calculate the amount payable to Vendors for their plans and credit the amount to the Vendor. They will also generate required reports for the information of Vendors.

G. Payments processing and Settlement of accounts with Agents/ Brokers

1. The Agents / Brokers / TPA's canvass for enrolment into Insurance and Benefit Products. The commission amount to Agents / Brokers / TPA's will be paid as per business rules and agreements. This may be fixed or based on a percentage of Premium amount. The periodicity of payment may be either onetime or periodic.
2. The Brokers can make use of custom developed software to promote both Software & Insurance / Benefit Providers for soliciting their Products. The software would calculate the amount due to Agents/ Brokers / TPA's to cater for all types of payments. It will also Generate Pay orders, update Accounts and print needed control and information reports.

H. Routine and Exception Reporting for Management Control

1. Reports are required to have control on the activities outlined in each of the above processes. These reports will help the management for decision-making.
2. Ready reckoned for calculating Premium amount, commission and brokerage for different plans will be made.
3. There will also be a list of FAQ's for use by Management, Agents / Brokers / TPA's, Individual beneficiary, Clients and Staff.

I. Customer Relationship Management

1. This process would enhance the relationship between Management, Staff, Agents / Brokers / TPA's, Beneficiaries, Groups, Clients, Vendors.
2. The concerned departments of Carrier would be responsible for maintenance and updating of Information pertaining to CRM activities.
3. This process [CRM] includes Call / Request Registration, Call / Request Tracking and Call / Request Closure.
4. Control Reports will be generated for Pending, Open and Closed Calls / Request.

J. Accounting and Audit

1. The amount received as Premium will be validated against the expected and exception report will be generated for each client and plan.
2. The amount paid against Commission and brokerage will be based on type of payment and periodicity.
3. The amount due to Individual beneficiary will be based on Service charges to the Client and the rebate from the Carrier.
4. Carriers will carry out audit on percentage of approved and rejected Claims manually at random and an audit report will be made.
5. The payment dues towards service charges and rebate will be credited to Corporate Accounting.
6. The Commission and Brokerage will be calculated for payments to Agents and brokers.
7. The Premium Payments to Vendors will be calculated and payments made/ adjusted.
8. Receipts and Acknowledgements will be sent through appropriate media.
9. Summary and Individual Reports will be generated as needed by the Management.

V. Nonprofit Organisations

A non-profit organisation, as defined by law, is an organisation that cannot distribute assets or income to, or for the benefit of its members, officers or directors. The organisation can, of course, compensate its employees, including officers and members, for services rendered and for goods supplied. This does not permit an organisation from earning a profit; it prohibits only the *distribution of profits*. A non profit organisation needs to earn a modest profit, on average, to provide funds for working capital and for possible “rainy days”.

Many such organisations are exempt from income taxes, property taxes and certain types of sales taxes.

In many industry groups, there are both non-profit and profit-oriented organisations. There are non-profit and for-profit hospitals, non-profit and for-profit schools and colleges and religious organisations.

Special Characteristics

1. *Absence of the Profit measure*

A dominant goal of all businesses is to earn a satisfactory profit; net income measures performance toward this goal. No such measure of performance exists in non-profit organisations. Many of them have several goals, and an organisations’ effectiveness in attaining its goals rarely can be measure by quantitative amounts. The absence of a satisfactory, quantitative, overall measure of performance is the most serious management control problem in this organisation.

The *income statement* is the most useful financial statement in a non-profit organisation, just as it is in a business. In a non-profit organisation, the net income should average only a small amount above zero. A large net income means that the organisation is not providing the services according to the expectations of the providers of resources. Net losses will lead to bankruptcy. So in order to survive, *the revenues must be more than its expenses*.

2. Contributed Capital

One major difference between business and non-profit organisations relates to the equity section of the balance sheet. Non-profit organisation receives contributed capital in two forms: plant and endowment. *Plant* includes contributions of buildings and equipment, or contributions of funds to acquire these assets. *Endowment* consists of gifts whose donors intend that the principal amount will remain intact indefinitely.

These organisations have *two sets of financial statements*. One set relates to operating activities including an operating statement, a balance sheet, and a statement of cash flows. The second set relates to inflows and outflows of contributed capital during a period and a balance sheet that reports contributed capital assets and the related liabilities and equity.

Inflows of contributed are capital contributions received in the period and gains on the endowment portfolio. *Outflows* are the endowment income that is reported as operating revenue, losses on the endowment portfolio, and write-offs of plant.

3. Fund Accounting

Many non-profit organisations use an accounting system that is called “fund accounting”. Accounts are kept separately for several funds each of which is *self-balancing* (i.e., the sum of the debit balances equals some of the credit balances). Most organisations have

- i. A *general fund* or *operating fund*, which corresponds closely to the set of operating accounts mentioned above.
- ii. A *plant fund* and an *endowment fund*, which account for the contributed capital assets and equities mentioned earlier.
- iii. A variety of other funds for special purposes.

Others are useful for internal control purposes. For management control purposes, the primary focus is on the general fund.

4. Governance

Non-profit organisations are governed by *boards of trustees*. Trustees are usually not paid, and many of them are unfamiliar with business management. Therefore, they generally exercise less control than the directors of a business corporation. Moreover, because performance is more difficult to measure in a non-profit organisation than in a business, the board is less able to identify actual or incipient problems.

The need for a *strong governing board* in a non-profit organisation is greater than in a business because the vigilance of the governing board may be the only effective of detecting when the non-profit is in difficulty. In a profit oriented organisation, a decrease in profits signals this danger automatically.

Management Control Systems

1. Product pricing

Many non-profit organisations give inadequate attention to their pricing policies. Pricing of services at their full cost is desirable.

A “*full-cost*” price is the sum of the direct costs, indirect costs and a small allowance for increasing the organisation’s equity. This principle applies to services that are directly related to the organisation’s objectives. Pricing for peripheral activities should be market-based. Thus a non-profit hospital should price its health care services at full cost, but prices in its gift shop should be *market-based*.

Management control is facilitated when prices are established prior to the performance of service.

2. Strategic Planning and Budget preparation

In non-profit organisations that must decide how best to allocate limited resources to worthwhile activities, strategic planning is a more important and more time consuming process. Absence of a profit measure makes program decisions more subjective.

Non-profit industries know before the budget year begins the approximate amount of their revenues. They do not have the option of increasing revenues during the year by increasing their marketing efforts. They budget expenses so that the organisation will at least break even at the estimated amount of revenue. They require that managers of responsibility centres limit spending close to the budget amounts. Therefore, the budget is the most important management control tool for financial activities.

3. Operation and Evaluation

In non-profit organisations there is no way of knowing what the optimum operating costs are. Therefore, responsibility centre managers tend to spend whatever is allowed in the budget, even though the amount is higher than is necessary. Conversely, they refrain from making expenditures that have an excellent payoff simply because the expenditure was not included in the budget.

Legal Environment

The important aspects of the legal environment in India are:

- i. The provisions of the Income Tax Act allow donations to non-profit organisations, unless they are for religious purpose, to be deducted from income.
- ii. There are restrictions on foreign funding under Foreign Contribution Regulation Act.
- iii. Their governance structure is laid down by the Society's Registration Act and Charities Act. These provide for trustees, management committees, board of directors and so on. But legal provisions of governance only cover the don'ts. The proactive features cannot be legislated.

Difficulties of Management Control in Service and Non-profit Organisations

Most service, government, and non profit organizations have more difficulty implementing management control systems than do manufacturing firms. Why?

The main problem is the outputs of service and non profit organizations are more difficult to measure than are the cars or computers that are produced by manufacturers. As a result, it may be more difficult to know whether the service provided is, for example, of top quality until long after the service has already been delivered.

The key to successful management control in any organization is proper training and motivation of employees to achieve goal congruence and effort, followed by consistent monitoring of objectives set in accordance with critical processes and success factors, but it is even more important in service-oriented organisations. For example, MBNA America, a large issuer of bank credit cards, identifies customer retention as its primary key success factor. MBNA trains its customer representatives carefully.

Each day it measures and reports performance on 14 objectives consistent with customer retention and rewards every employee based on those 14-objectives. Measures include answering every call by the second ring, keeping the computer up 100% of the time, and processing credit-line requests within one hour. Employees have earned bonuses as high as 0% of their annual salaries by meeting those objectives. Non profit and government organisations also have additional problems designing and implementing an objective that is similar to the financial 'bottom line' that often serves as a powerful incentive in private industry.

Furthermore, many people seek positions in non-profit organisations primarily for other than monetary rewards. For example, volunteers in the Peace Corps receive very little pay but derive much satisfaction from helping to improve conditions in underdeveloped countries. Thus, monetary incentives are generally less effective in non profit organisations. Control systems in non profit organisations probably will never be as highly developed as are those in profit-seeking firms because

1. Organizational goals and objectives are less clear. Moreover, they are often multiple, requiring difficult trade-offs.
2. Professionals (for example, teachers, attorneys, physicians, scientists, economists) tend to dominate non-profit organisations. Because of their perceived professional status, they have been less

receptive to the installation or improvement of formal control systems.

3. Measurements are more difficult because
 - a. There is no profit measure.
 - b. There are heavy amounts of discretionary fixed deposits, which make the relationships of inputs to outputs difficult to specify and measure.
4. There is less competitive pressure from other organisations or “owners “ to improve management control systems. As a result, for example, many cities in the United States are “privatizing” some essential services such as sanitation by contracting with private firms.
5. The role of budgeting is often more a matter of playing bargaining games with sources of funding to get the largest possible authorization than it is rigorous planning.
6. Motivations and incentives of individuals may differ from those in for-profit organizations.

VI. Government and Cooperative Business

Introduction

Contrary to popular impression, a substantial proportion of market based transaction, which we may describe as business, whether in capitalist, socialist, or welfare economic systems are in the hands of the state and cooperatives. A large number of business managers, therefore, work in organisations run by the government and cooperatives. Therefore understanding this segment is very important. Cooperatives also are the more explicit form of the dual focus control systems.

Government and Business

Many analysts have gone to great lengths on the rationally and impact of the legal structures regarding the business and government. These are spread across in various forms: railways are a government department, electricity boards have been form under an act of parliament, Food Corporation of India was established under a separate enactment.

Mother Dairy was formed under the Society Registration Act and the bulk of businesses are registered under the Company's Act.

Some of that work under the Indian Company's Act could also use the concept of holding companies functioning as an umbrella for several companies. This is the position of the steel giant, SAIL, and the coal giant coal India, which were created in the image of Italian Public Sector organisations by Mohan Kumaramangalam, the then Minister for steel and mines of the government of India. Public sector organisation working under the company's act would have the patterns of control as the private sector and would be in the level playing field. S.S.Khera was a distinguished member of the Indian Civil Service who was the cabinet secretary, the most civilian position in the Government of India.

This over simplified approach is not useful in understanding government and business. It would see that these legal structures are largely irrelevant, but could affect operations albeit in trivial matters. The over-riding styles are driven by the nebulous accountability of ministers in the government to the people at last, their constituencies, and their hangers-on, the dependence of managers on ministerial favours and penalties. Legal structures are quite unable to change substantially and permanently. They can at best be used as tools as advocacy and manipulation and in meeting the opponents down in sparring matches.

Process of Setting of Strategy and Objectives of Government Business.

Government in business could owe much of its inspiration to the features of the Soviet Union formality in its analytic frame work, focus on internal controls, and connection to the economics of the classical approach, but its rationale is hardly based on profitability and is vague, as in the procedural approach. It does not grow from within by learning from local conditions, as in the system approach, or evolutionary approach.

Are Multiple Objectives a Necessary Feature of Government in Business?

No current day organisation can avoid having multiple objectives, therefore making it necessary to use balanced score cards that can balance these objectives. Government in business has these features more pronounced than in the purely private sector organisation. We will see

Criteria	Score Weight	1	2	3	4	5	Actual	Raw Score	Weighted Achievement
Vehicle production (thousand)	22%	115	105	95	85	75	118	1	0.22
Vehicle export million ₹	6%	12	11	10	9	8	21	1	0.06
Pre tax profit	25%	25	20	15	10	5	50	1	0.25
Indigenization	10%	92	91	90	89	88	91	2.42	0.24
Maruti	5%	90	89	88	85	82	87	3.34	0.17
Omni	2%	67	66	65	63	60	66	2.25	0.04
Gypsy									
Sale spare parts ₹ Crores	9%	29	28	27	26	24	39	1	0.09
New stockists	2%	12	11	10	9	8	12	1	0.02
New service stations	2%	12	11	10	9	8	12	1	0.02
Warranty claim / vehicle	2%	95	100	105	110	115	75	1	0.0
Value added / employee	9%	5	4.75	4.5	4.3	4	6	1	0.09
R & D budget utilization	6%	4	3.5	3	2.5	2	0.5	5	0.30
Total composite score									1.52

Maruti Udyog Evaluation

how this feature would require evolution of instrument of control which could go even beyond balanced score card.

Origins of Opportunistic Behaviour in Government Business

Due to reasons of fuzziness of accountability, opportunistic behaviour is more extensive in government in business. Let us see typical example. A well known example involves HUDCO. It paid for the telephone calls of a minister and his cook, which ran to astronomical figures. There was a public outcry.

A more recent example was when a minister stayed in an expensive hotel in Goa and appeared to be palming off the bill to a public undertaking under him. A public outcry followed and the payment was, thankfully, ultimately made by the minister from his personal account.

These examples are some of the more trivial incidence seen in the backdrop of the overall performance of the government organisation in business. But they may be indicated of greater malaise and massive failures in the control system. We will look for most strategic solution to take care of the more major issues. But irritants are perhaps more directly controlled by greater transparency which private sector operators do not need.

Monitoring and Controlling Performance

The simplest way of controlling and monitoring public sector performance is watching profits. But this makes nonsense of all long term objectives. Amartya Sen, Nobel laureate and well known economist says

“ having a well formulated system of social profits based on shadow prices may therefore save the purpose of giving management a clear perception of interest of the respective public enterprise. “

But this somewhat starry-eyed vision of control system using measurements with hypothetical adjustments for social cause could be quite convoluted, subject to serious biases and totally useless for concurrent controls, even if it may have some remote use in evaluation in decision making. No wonder the systems of control which came to the practically evolved all over the world were totally different.

History of International Control Systems in Public Sector

The basic structure of control systems of a sample from fifty countries of the world is that they are converging towards, what is described as performance contracting. Performance contracting as a concept is based on the government entering into contract with a state owned enterprise (SOE), wherein several parameters of achievement are contracted for and in return for which the SOE gets autonomy and help from the government in a contingency. The contract can also provide for a sharing of profits. The monitoring is focused on the parameters contracted, which is reflected in the internal control systems too.

Performance contracting as a devise started in France and is now used all over the world, including countries like China, Korea, Sri Lanka, Pakistan, Morocco, Australia, New Zealand, Columbia and India. Its extension to socialized medicine is a striking application and is a centre of political debate in Great Britain and Europe.

The Socialized Medicine of UK and Europe

The great divide between the Great Britain and Europe on the one hand, and the United States on the other is that of the dominance of socialized medicine in the former. Medical attention is treated as a fundamental right in these countries. It, however, coexists with market systems. Concepts of market systems continue to be used by them for ensuring both allocative efficiency(Y efficiency) and operational efficiency(X efficiency)

The National Health Scheme of Great Britain was born with the blazing idealism of Aneurin Bevan, the fiery Labour partisan from Wales. Modelled on the health system of the Soviet Union to begin with, it evolved somewhat differently thereafter. Its example spread rapidly to Europe and the systems prevailing in Italy, France, Netherlands, Finland, and Germany bear its imprint. Its control system is a combination of the several features of the Whitting on classification.

Medical facilities are distributed across the countries as trusts. These trusts are autonomous and are allotted funds from the pool of central taxation as per a formula based on population covered and the existing record of morbidity. In return for the funds and the autonomy

they are given, they are obliged to achieve certain levels of performance on a set of parameters. Typically, the waiting time for operations, for fatality from critical ailments like heart problems and cancer are boundaries within which they will have to operate. But the trust has the freedom to hire services in a market to enable them to fulfil these parameters.

Each trust can develop its own strategy to fulfil its obligations. Each of them can have a mechanism for surveying the environment and making business plans. Has this resulted in optimum achievement? The answer is yes and no.

1. The costs have been kept low but even then cannot be obtained within feasible taxation limits.
2. Productivity is effectively controlled and the factors affecting it and the adjustments required for prescribing realistic norms have been evolved. But several cases are reported in which the excessive adherence to performance measures result in manipulation to achieve scores for the means and sacrificing the ultimate outcomes. Thus to show lower waiting time at the dispensaries, patients were not taken off the ambulance to delay registration at the waiting line.
3. Waiting time in some areas is abnormally high, for example, in dental treatment.
4. The system hardly ever throws up great innovation in surgery and medicine.
5. The doctors are exceptionally considerate to their patients even if the cadres are racked with frustrating rivalry due to bureaucratic appraisal systems that have great difficulty in recognizing true merit usually more easily visible in totally market driven systems. This rivalry results in manipulation of the type described in the second point.

In brief, the control systems in socialized medicine is a great improvement over the capitalist market driven systems in United States, in many respects, but have severe draw backs in other respects which need to be corrected over time.

The MOU System in India: A Success Story

The culmination of the performance contract system is the memorandum of understanding (MOU) followed in India over the past decade. The MOU is evolved in consultation the highest authority in the government so that the replacement of profit criterion does not result in too soft a target as feared by some. A typical MOU with Maruti Udyog and its comparison with the actual is indicated in the exhibit 1 below:

It may be seen that the net resultant source of 1.52 would evaluate Maruti Udyog as between 'excellent' (1) and 'very good' (2).

By the same logic some organisations having losses could still be graded excellent by these criteria. Is this hypocrisy? The answer is 'No'.

This system has enabled public sector units to consistently improve over the weighed indices. Also, incidentally, profits have also gone up. Autonomy has certainly been enhanced and the haziness in accountability has been considerably reduced,. Would this eliminate the trivial cases of opportunism? The routes to eliminate them would be transparency.

Distinction between Balanced Score Card and MOU

There are many similarities between the balanced score cards and the MOU. But there are three distinct differences:

1. A BSC ultimately aligns all measurement to long term profitability, whereas MOU ultimately aligns everything to the social objective of which profit is only one, even if it is not the most important criterion.
2. A MOU concentrates more on outcomes, whereas BSC concentrates a lot on processes.
3. A MOU is externally determined, whereas a BSC is a product of internal participative discussion.

Cooperatives

Hansmann's Concept of the Rationale of Cooperatives

Cooperatives are forms of organisation wherein the strategic and management controls are not in the hands of shareholders or the government but in the hands of producers of goods and services external to the organisation, which are sold to the organisation, or the consumers of the goods and services of the organisations or the workmen who produce the goods and services within the organisation. These organisations have an optimum of the dual focus of control.

A very large number of organisations are cast in the cooperative model. The reason for the preference could be twofold:

1. Where a particular stake holder has less option to deal with outside the organisation, it would be worthwhile for them to spend their energy and time deciding things in the organisation, both allocative and operational, to make sure it functions effectively.
2. Where transaction cost would decrease if we have better trust relationship between the buyer and the seller. Decision making could be shared between them without interference with providers of capital, that is, the shareholders.

Cooperatives in Business and in Non-Business

Co-operatives as prevalent in India are not all in business. Typically, house building cooperatives do not have to indulge in a continuous stream of producing, buying and selling. Their control systems are, therefore, more akin to non profit organisations.

Government Regulators of Cooperatives

For the reason that the marginal costs incurred by the members to effectively control cooperative organisations may be singly much higher than marginal gains, individual effort may not often be forthcoming. The state may see this as, what is known in economics, the problem of the common or the tragedy of the common in which if there are no regulators free riders would destroy common property. The government may offer to

control this common property externally on behalf of all the members. So goes the theory. But such control by those without any direct stake, except that which is available from opportunistic behavior makes nonsense of cooperatives as viable organisations.

Contours of Control Systems in Indian Cooperatives in Business

Control systems have been described in cooperatives and other village level organisations as overall strategic governance, revolving round belief systems in leadership and operational decisions, revolving around continuous consultation with the users of the cooperative. This combination enables minimizing marginal transaction costs of participation, a factor worrying economic theorists of co-operation.

Thus in Amul Milk Co-operative, product mix decisions could be strategically decided at the top but the location of milk routes, and milk collection centers, cattle feed distribution, bonus decisions could be participative. In sugar cooperatives, scheduling the cutting of cane could be participative. They also note that contrary to public pronouncements and much of the academic research carried out the in west, caste did not affect control mechanisms in Indian village level institutions once the democratic principles took root.

VII. Control in Projects

Nature of Projects

“A project is a set of activities intended to accomplish a specified and result of sufficient importance to be of interest to management”.

Projects include construction projects, the production of a sizeable unique product (such as turbine), rearranging a plant, developing and marketing a new product, consulting engagements, audits, acquisitions and divestitures, litigation, financial restructuring, research and development work, development and installation of information systems and so on.

A project begins when management has approved the work to be done and has authorized the amount of resources to be spent, and the project ends when its objective when its objective has been accomplished or when it has been cancelled.

Construction of a building is project and routine maintenance of the building is an ongoing operation. The completion of a project may lead to an ongoing operation, as in the case of a successful development project.

At one extreme, a project may involve one or a few persons working for a few days or weeks, performing repetitive tasks. For example, an annual financial audit conducted by a public accounting firm. At the other extreme, a project may involve thousands of people working for several years, performing unlike work that ever done before. For example, project to land the first men on moon.

Difference between management control of projects and ongoing operations

The characteristics of projects that make the management control of projects different from the management control of ongoing activities are discussed below.

1. Single objective

A project has a single objective whereas ongoing operations have multiple objectives like ordering equipments, planning marketing campaigns training new employees. Project performance can be judged in terms of the desired end product and operating performance should be judged in terms of all results achieved by the manager.

2. Organization Structure

The project organization is superimposed on an ongoing operating organization. Its management control system is superimposed on the management control system of that organization. These problems do not exist in an ongoing organization.

3. Focus on the project

Project control focuses on the project, whose objective is to produce a satisfactory product, within a specified time period, and

at an optimum cost. In contrast, control in ongoing organizations focuses on the activities of a specified time period, such as a month, and on all the products worked on in that period.

4. *Need for Trade-Offs*

Projects usually involve trade-offs between scope, schedule and cost. Costs can be reduced by decreasing the scope of the project and the schedule can be shortened by incurring overtime costs. Similar trade-offs occur in ongoing organizations, but they are not typical of the day-to-day activities in such organizations.

5. *Less-Reliable Standards*

Performance standards are less reliable for projects than for ongoing organizations. Project design is used only once. But the standards for repetitive project activities can be developed from past experience or from engineering analyses of the optimum time and costs.

6. *Frequent Changes in Plans*

Plans for projects tend to be changed frequently and drastically. Unforeseen environmental changes on a construction project may lead to changes in plans.

7. *Different Rhythm*

Most projects start small, build up to a peak activity and then taper off as completion nears and only cleanup remains to be done. Ongoing activities tend to operate at the same level of activity for a considerable time and then change from that level to another.

8. *Greater Environmental Influence*

Projects tend to be influenced more by the external environment than is the case with operations in a factory. If the project involves excavating, conditions beneath the earth's surface may cause unexpected problems, even for a simple project as building a house.

Project Control Environment

1. Project Organization Structure

A project organization is a temporary organization. A team is assembled for conducting the project, and the team is disbanded when the project has been completed. Team members may be employees of the sponsoring organization, may be hired for the purpose, or some or all of them may be engaged under a contract with an outside organization.

Matrix Organizations: If members of the project team are employees of the sponsoring organization, they have two bosses – the project manager of the functional department to which they are permanently assigned. Such an arrangement is called matrix organization. In overhauling a ship, craftspeople such as electricians, pipe fitters, etc. are drawn from various functional departments in the shipyard, and they work on the project when their skills are needed. However, their basic loyalty is to their functional department. The project manager has less authority over personnel than the manager of a production department, whose employees have an undivided loyalty to that department.

2. Contractual Relationships

If the project is conducted by an outside contractor, an additional level of project control is created by the sponsoring organization which has its own control responsibilities. The contractor may bring its own control system to the project, and this system may need to be adapted to provide information that the sponsor needs.

The form of the contractual arrangement has an important impact on management control. Contracts are generally of two types:

i. Fixed-Price Contracts

Here, the contractor agrees to complete the specified work by a specified date at a specified price. Usually, there are penalties if the work is not completed to specifications or if the scheduled date is not met. If the sponsor decides to change the scope of the project, a *change order* is issued. The parties must agree on the scope,

schedule, and cost implications of each change order. If the change orders involve increased costs, then it must be borne by the sponsor. For example, the construction of a conventional house may involve a dozen or so change orders. If the change orders are in thousands, the final price of the work is actually not fixed in advance.

Fixed-price contracts are appropriate when the scope of the project can be closely specified in advance and when uncertainties are low. If the contractor signs a contract that does not include adequate provisions for adjustments caused by changes in scope or by uncontrollable uncertainties, he will resist the sponsor's requests to make desirable changes, and he may even be unwilling to complete the project.

ii. Cost-reimbursement Contracts

Here, the sponsor agrees to pay reasonable costs plus a profit. In such a contract, the sponsor has considerable responsibility for the control of costs and therefore needs a management control system and associated control personnel. Cost-reimbursement contract is appropriate when the scope, schedule, and cost of the project cannot be estimated reliably in advance.

In this contract, the profit component, or fee, usually should be a fixed monetary amount. If it is a percentage of costs, the contractor is motivated to make the costs high and thereby increase his profit.

Variations

Within these two types of contracts, there are many variations. In an *incentive contract*, completion dates or cost targets, or both, are defined in advance, and the contractor is rewarded for early completion of the project (a completion bonus that is set at an amount per unit of time saved) or for incurring less cost (a cost bonus that is set as a percentage of the costs saved). This type of contract is appropriate when moderately reliable estimates of completion and cost can be made.

Different contract types may be used for different activities on the project. For example, direct costs may be reimbursed under a cost-reimbursement contract because of the high degree of uncertainty, while

the contractor's overhead costs may be covered by a fixed-price contract, either as an amount for the total project or for each month.

If unit costs can be estimated reasonably well, but the quantity of work is uncertain, the contract may be for a fixed price per unit applied to the actual number of units provided. For example, in a catering activity, reimbursement is often a stated amount per meal served (plus a fixed monthly amount for overhead).

3. Information Structure

i. Work Packages

In a project control system, information is structured by elements of the project. The smallest element is called a **work package**, and the way in which these work packages are aggregated is called the **work breakdown structure**.

A work package is a measurable increment of work, usually of fairly short duration of a month or so. It should have an unambiguous, identifiable completion point, which is called a **milestone**. Each work package should be the responsibility of a single manager.

If the project has similar work packages (for example, a separate work package for the electrical work on each floor of an office building), each should be defined in the same way so that cost and schedule information can be compared with similar work packages.

ii. Indirect Cost Accounts

Apart from work packages for direct project work, cost accounts are established for administrative and support activities. Unlike the work packages, these activities have no defined output. Their estimated costs usually are stated as per unit of time, such as a month.

The chart of accounts, the rules for charging costs to projects, and the approval authorities and their specific signing powers are also developed in advance. If during the project it turns out that the work

breakdown structure or the accounting system is not useful, it must be revised. This may require recasting much information; both already collected information as well as information describing future plans.

Steps in Project Control Process

I. Project Planning

In the planning phase, the project planning team takes the rough estimates that were used as the basis for the decision as a starting point to undertake the project. It refines these estimates into detailed specifications for the product, detailed schedules, and a cost budget. It also develops a management control system and underlying task control systems, and an organization chart.

There is a plan for planning, that is, a description of each planning task, which is responsible for it, when it should be completed, and the interrelationships among tasks. The planning process is itself a subproject within the overall project. There is also a control system to ensure that the planning activities are properly carried out.

1. Nature of the Project Plan

The final plan consists of three related parts: scope, schedule, and cost.

- i. The **scope** part states the specifications of each work package and the name of the person or organization unit responsible.
- ii. The **schedule** part states the estimated time required to complete each work package and the interrelationships among work packages, that is, which work package must be completed before another can be started. The set of these relationships is called a network.
- iii. **Costs** are stated in the project budget, usually called the control budget. Unless work packages are quite large, monetary costs are shown only for aggregates of several work packages. Resources to be used for individual work packages are stated as non-monetary amounts, such as person-days or cubic yards of concrete.

2. Network Analysis

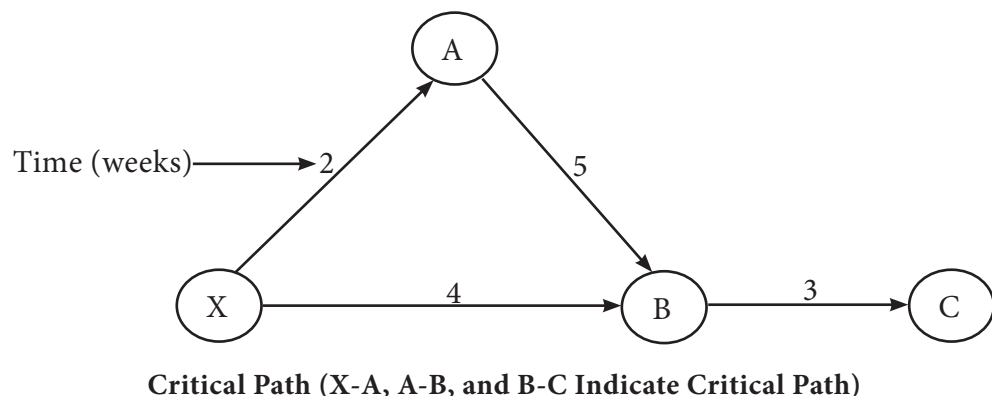
The important tools for constructing the time schedule for the project are PERT (Program Evaluation and Review Technique) and CPM (Critical Path Method). These are techniques for network analysis. Each technique has three basic steps:

- i. estimating the time required for each work package,
- ii. identifying the interdependencies among work packages – which must be completed before another can be started, and
- iii. Calculating the critical path.

A network diagram consists of

- a. A number of nodes i.e., milestones, each of which is a sub goal that must be completed to accomplish the project, and
- b. Lines joining these nodes to one another; these lines represent activities.

The estimated time to carry out each activity is shown on the network diagram. An activity connecting two events, say, A and B, indicates that the activity leading to B cannot be started until event A has happened. These activities are work packages. Thus, a network diagram shows the chronological sequence in which events must be completed to complete the whole project.



Critical Path and Slack

Project networks can be analyzed using computer programs. They

identify the critical path, which is the sequence of events that has the shortest total time to complete the project. The nature of the critical path is shown in the above figure.

To complete event B, event A must first be completed which requires two weeks. A-B requires an additional five weeks. Then B-C which requires an additional three weeks is done to complete the project. This is the critical path, and it is ten weeks long. To complete event B, activity X-B also must be undertaken, with an estimated time of four weeks. However, activity B-C cannot be started until both A-B and X-B have been completed. X-A and A-B require a total of seven weeks; and X-B, which requires only four weeks, can be performed at any time during this seven-week period. Activity X-B is said to have three weeks of *slack*.

The management control implications in CPM are:

- First, in the control process, special attention must be paid to those activities that are on the critical path, and less attention needs to be paid to slack activities.
- Second, in the planning process, attention should be given to possibilities for reducing the time required for critical path activities; if possibilities exist, the overall time required for the project can be reduced.
- Third, it may be desirable to reduce critical path times by increasing costs, such as incurring overtime, but additional money should not be spent to reduce the time of slack activities.

PERT

PERT is a method to analyze the involved tasks in completing a given project, especially the time needed to complete each task, and identifying the minimum time needed to complete the total project.

PERT was developed primarily to simplify the planning and scheduling of large and complex projects. It was able to incorporate uncertainty by making it possible to schedule a project while not knowing precisely the details and durations of all the activities. It is more of an event-oriented technique rather than start- and completion-oriented, and is used more in projects where time, rather than cost, is the major

factor. It is applied to very large-scale, one-time, complex, non-routine infrastructure and Research and Development projects.

- *Optimistic time (O)*: the minimum possible time required to accomplish a task, assuming everything proceeds better than is normally expected
- *Pessimistic time (P)*: the maximum possible time required to accomplish a task, assuming everything goes wrong (but excluding major catastrophes).
- *Most likely time (M)*: the best estimate of the time required to accomplish a task, assuming everything proceeds as normal.
- *Expected time (TE)*: the best estimate of the time required to accomplish a task, assuming everything proceeds as normal (the implication being that the expected time is the average time the task would require if the task were repeated on a number of occasions over an extended period of time)

3. Estimating Costs

Cost estimates are made as an aggregate incorporating several work packages. Resources used on individual work packages are controlled in terms of physical quantities, rather than costs. Cost estimates tend to be less accurate because projects are less standardized and cost information accumulated is therefore not a valid basis for comparison. Nevertheless, if a contractor has performed similar work in the past, the costs incurred on these work packages provide a starting point in estimating the costs of the new project. For some work, industry norms, or rules of thumb, have been developed that are useful in estimating costs.

Since no one knows what will happen in the future and what future costs will actually be, two types of unknown must be taken into account. The first type is the **known unknowns**. These are estimates of the cost of activities that are known to be going to occur, such as digging the foundation for a house. The nature of the task is known, and the costs, although known, often can be estimated within reasonable limits on the basis of past experience.

The other unknowns are the *unknown unknowns*. For these activities, the estimator does not know that they are going to occur and obviously, therefore, has no way of estimating their cost. Work stoppages, destruction caused by storms or floods, delays in receiving materials, accidents and failure of government inspectors to act in a timely manner are examples. A fixed price contract usually states that costs caused by such events are added to the fixed price.

The impossibility of estimating the cost of unknown unknowns must be recognized. Their actual costs may range from zero up to any amount whatsoever. There is no definable upper limit. If the contract does not provide that all these costs are added to the fixed price, the estimator should include a contingency allowance for them.

4. Preparing the Control Budget

The control budget is prepared at the time of inception of the work allowing just enough time for approval by decision makers prior to the commitment of costs. For a lengthy project, the initial control budget may be prepared in detail only for the first phase of the project, with fairly rough cost estimates for later phases. Detailed budgets for later phases are prepared just prior to the beginning of the work on these phases. Delaying preparation of the control budget until just prior to the start of work ensures that the control budget incorporates current information about scope and schedule, the results of cost analysis, and current data about wage rates, material prices and other variables.

Therefore, it avoids making budget estimates that are based on obsolete information. This is a waste of effort. The control budget is an important link between planning and control of performance. It represents both the sponsor's expectations about what the project will cost and also the project manager's commitment to carry out the project at that cost

II. Project Execution

At the end of the planning process, there exists for most projects a specification of work packages, as scheduled and a budget; also, the manager who is responsible for each work package is identified. The schedule shows the estimated time for each activity, and the budget shows

estimated costs of each principal part of the project. This information often is stated in a financial model. If resources to be used in detailed work packages are expressed in nonmonetary terms, such as the number of person-days required, the control budget states monetary costs only for a sizeable aggregation of individual work packages. In the control process, data on actual cost, actual time, and actual accomplishment are compared with these estimates. The comparison may be made either when a designated milestone in the project is reached or at specified time intervals, such as weekly or monthly.

Basically, both the sponsor and the project manager are concerned with these questions.

- i. Is the project going to be finished by the scheduled completion date?
- ii. Is the completed going to meet the stated specifications?
- iii. Is the work going to be done within the estimated costs?

If at any time during the course of the project the answer to one of these questions is no, the sponsor and project manager need to know why and they need to know the alternatives for the corrective action.

It is sometimes desirable to make trade-offs among time, specifications and cost, using the financial model and other available information. For example, overtime might be authorized to assure completion on time, even though this would add to costs; or some of the specifications might be relaxed to reduce costs.

Nature of Reports

Managers need three types of reports

- i. ***Trouble reports*** report both on trouble that has already happened such as delay resulting from any of a number of possible causes and also anticipated future trouble. Critical problems are flagged. It is essential that these reports get to the appropriate quickly, so corrective action can be initiated.
- ii. ***Progress reports*** compare actual schedule and costs with planned

schedule and costs for the work done, and they contain similar comparisons for overhead activities not directly related to the work. Variances associated with price, scheduled delays, and similar factors may be identified and measured quantitatively, using techniques for variance analysis that are similar to those used in the analysis of ongoing operations.

- iii. **Financial reports** are accurate reports of project costs that must be prepared as a basis for progress payments if there is a cost-reimbursement contract; and they usually are necessary as a basis for financial accounting entries for fixed-price contracts.

Much of the information in management reports comes from detailed records collected in task control systems. These include such documents as work schedules, time sheets, inventory records, purchase orders, requisitions and equipment records.

Quantity of reports

To make certain that all needs for information are satisfied, management accountants sometimes create more than the optimum number of reports. An unnecessary report, or extraneous information in a report incurs extra cost in assembling and transmitting the information. Therefore, a review of the set of reports often is desirable and this may lead to the elimination of some report and the simplification of others. This paperwork problem, often referred as information overload is not necessarily serious.

Percent Complete

Some work packages will be only partially completed at the reporting date, and the percentage of completion of each such work package must be estimated as a basis of comparing actual time with scheduled time and actual costs with budgeted costs.

Summarizing progress

In addition to determining the percentage of completion of individual work packages, a summary of progress on the whole project is useful. Progress payments

Often are made when specified milestones are reached. Thus, the system usually contains some method of aggregating individual work packages, which provides an overall measure of accomplishment. A simple approach is to use the ratio of actual person-hours on work packages completed to date to total person-hours for the project; but this is reliable only if the project is labour intensive.

Punch list

Close to the end of a construction project, the sponsor prepares a list of items yet to be accomplished, including defects that need to be corrected. This “punch list” is negotiated with the project manager. Final payment is held up until the agreed-upon work has to be done.

Use of reports

Trouble reports

Managers spend much time dealing reports of trouble. The typical projects have many such reports, and one of the manager’s tasks is to decide which ones have the highest priority. In the limited number of hours in a day, the manager of a large project cannot possibly deal with all the situations that have caused, or that may cause, the project to proceed less than smoothly. The manager therefore has to decide which problems will get his or her personal attention, which will be delegated to someone else, and which will be disregarded on the assumption that operating personnel will take the necessary corrective action.

Progress reports

Not only do managers try to limit the number of trouble spots to which they give personal attention, they also try to avoid spending so much time solving immediate problems that no time remains for careful analysis of the progress reports. Such an analysis may reveal potential problems that are not apparent in the reports of trouble, and the manager needs to identify these problems and plan how they are to be solved. The temptation is to spend too much time on current problems and not enough time identifying problems that are not yet apparent.

The approach to analyzing progress reports is the familiar one of “management by expectation”. If progress in a particular area is satisfactory, no attention needs to be paid to the area. Attention is focused on those areas in which progress is, or may become unsatisfactory.

The analyses of reports that show actual time compared with the schedule, and actual cost compared with the budget, are relatively straightforward. In the interpretation of the time report, the usual presumption is that if a work package was completed in less than the estimated time, the responsible supervisor is to be congratulated; if more than estimated time was spent, questions are raised.

It is important that actual costs be compared with the budgeted costs of the work done, which is not necessarily the same as the budgeted costs for the time period. The danger of misinterpretation would show actual and budgeted costs for a project. As of the end of September, actual costs were \$345,000, compared with budgeted costs of \$300,000, which indicates a cost overrun of \$45,000. However, the budgeted cost of the work actually completed through September was only \$260,000, so the true overrun was \$85,000.

Reports on indirect costs are prepared separately. These reports measure costs in a different dimension than do reports on the direct costs of project work. In the case of direct costs, actual costs are compared with the budgeted costs for the work actually accomplished. In the case of indirect costs, the actual costs for a period, such as a month, are compared with the budgeted costs for that same period.

Cost to complete

In their progress reports, some organizations compare actual costs to date with budgeted costs for the work that has been done to date. Others report the current estimate of total costs for the entire project, compared with the budgeted costs for the entire project. The current estimate is obtained by taking the actual costs to date and adding an estimated cost to complete- that is, the additional costs required to complete the project. The latter type of report is a useful way of showing how the project is expected to come out, provided that the estimated cost to complete is properly calculated.

Informal Sources of Information

Because written reports are tangible, descriptions of management control systems tend to focus on them. In practice, these reports usually are less important than information that the project manager gathers from talking with people who actually do the work, from members of his or her staff, from regularly scheduled or ad hoc meetings, from informal memoranda, and from personal inspection of the status of the work. From these sources, the manager learns of potential problems and of circumstances that may cause actual progress to deviate from the plan. This information also helps the manager to understand the significance of the formal reports because these reports may not describe important events that affected actual performance.

In many cases, a problem may be uncovered and corrective action taken before a formal report is prepared, and a formal report does no more than confirm facts that the manager has already learned from informal sources. This is an illustration of the principle that formal reports should contain no surprises. Nevertheless, formal reports are necessary. They document the information that the manager has learned informally, and this documentation is important if questions about the project are raised subsequently, especially if there is controversy about the results.

Revisions

If a project is complex or if it is lengthy, there is a good chance that the plan will not be adhered to one or more of its three aspects: scope, schedule, or cost. A common occurrence is the discovery that there is likely to be a cost overrun – that is, actual costs will exceed budgeted costs. If this happens, the sponsor might decide to accept the overrun and proceed with the project as originally planned, decide to cut back on the scope of the project with the aim of producing an end product that is within the original cost limitation, or decide to replace the project manager if the sponsor concludes that the budget overrun was unwarranted. Whatever the decision, it usually leads to a revised plan. In some cases, the sponsor may judge that the current estimates of the benefits is lower than the current cost-to-complete estimate and therefore decide to terminate the project.

The revised plan is presumably a better indication of the performance that is currently expected, but there is a danger that a persuasive project manager can negotiate unwarranted increases in budgeted costs or that the revised plan will incorporate, and thus hide, inefficiencies that have accumulated to date. In either case, the revised plan may be a rubber baseline – that is, instead of providing a firm benchmark against which performance is measured, it may be stretched to cover up inefficiencies.

It is better to compare actual cost with both the original plan and revised plan. The first section of such a summary report shows the original budget, the revisions that have been authorized to date, and the reasons for making them. Another section shows the current cost estimate and the factors that caused the variance between the revised budget and the current estimate of costs. The following exhibit 2 is an example of such a report.

Original budget.....	\$1,000
Authorized revisions to date:	
For inflation.....	50
For specification changes.....	200
For time delays.....	60
For cost savings	<u>(30)</u>
Revised budget.....	1,280
Current estimate to complete.....	<u>1,400</u>
Variance.....	\$120
Explanation of Variance:	
Material cost increases.....	\$20
Overtime.....	60
Spending variances.....	<u>40</u>
	\$120

Project Cost Summary (\$'000s)

Project Auditing

The audit of quality must take place as the work is being done. If it is delayed, defective work on individual work packages may be hidden; they are covered up subsequent work (example, the quality of plumbing work on a construction project cannot be checked after walls and ceilings have been finished). In some projects, the audit of costs also is done as the work progresses; in others, the cost audit is not made until the project has

been completed. In general, auditing as the work progresses is preferable; it may uncover potential errors that can be corrected before they become serious. However, project auditors should not take an undue amount of the time of those who are responsible for doing the work.

In recent years internal auditors have expanded their function into what is called *operational auditing*. In addition to examining costs incurred, they call attention to management actions that they believe are substandard. Properly done, operational auditing can be useful. However, there is the great danger that the auditors, who, after all, are not managers, will second-guess the decisions that managers made in the light of all circumstances – as the managers understood them - at the time that decisions were made.

III. Project Evaluation

The evaluation of projects has two separate aspects: (1) an evaluation of performance in executing the project, and (2) an evaluation of the results attained from the project. The former is carried out shortly after the project has been completed; the latter may not be feasible until several years later.

Evaluation of performance

The evaluation of performance in executing the project has two aspects; (1) an evaluation of project management, and (2) an evaluation of the process of managing the project. The purpose of the former is to assist in decisions regarding project managers, including rewards, promotions, constructive criticisms, or reassignment. The purpose of the latter is to discover better ways of conducting future projects. In many cases, these evaluations are informal. If the results of the project were unsatisfactory and if the project was important, a formal evaluation is worthwhile. Also, formal evaluation of a highly successful project may identify techniques that will improve performance on future projects.

Cost Overruns

When actual costs exceed budgeted costs, there is said to be a cost overrun. To some, this implies that actual costs were too high. An equally

plausible conclusion, however, is that the budgeted costs were too low. If the higher costs resulted from changes in the scope of the project or from non controllable factors, the explanation is that there was an underestimate of costs, rather than excessive actual costs. Interpretation of the reports is complicated by the need to analyze both the budget and actual costs.

Hindsight

In looking back at how well the work on the project was managed, the natural temptation is to rely on information that was not available at that time. Within insight, one can usually discover instances in which the “right” decision was not made.

Some positive indications of poor management may be identified. Diversion of funds or other assets to personal use of the project manager is one obvious example. If there were major specification changes or cost overruns, these changes should have been authorized, and cash flows should have recalculated to determine whether the return on the project was still acceptable.

Another example of poor management is a manager’s failure to tighten a control system that permits others to steal, but this is more difficult to judge because overly tight controls may impede progress on the project. Evidence that the manager regards cost control as much less important as an excellent product that was completed on schedule is another indication of poor management, but it is not conclusive.

The evaluation of the process may indicate that reviews conducted during the project were inadequate, or that timely action was not taken on the basis of these reviews. For example, the review may indicate that on the basis of information available at that time, the project should have been redirected or even discontinued, but this was not done.

The evaluation also may lead to changes in rules or procedures. It may identify some rules that impeded efficient conduct of the project. Conversely, it may uncover inadequate controls. As a part of the evaluation, suggestions for improving the process should be solicited from project personnel.

Evaluation of results

The success of a project cannot be evaluated until enough time has elapsed to permit measurement of its actual benefits and costs. This may take years. Unless the impact can be specifically measured, such an evaluation may not be worthwhile. To take extreme examples, the benefits of the introduction of a new product line usually can be measured because the revenues and expenses associated with that line will be known, whereas the benefits of installing a labour-saving machine will not be identifiable if the resulting costs are buried in a variety of product costs and not separately traced to the new machine. Furthermore, there is no point in attempting to evaluate a project unless an action can be taken based on this analysis.

For many projects, evaluation of results is complicated by the fact that the expected benefits were not stated in objective, measurable terms, and the actual benefits also were not measurable. In these cases, a quantitative benefit / cost analysis is not feasible, and reliance must be placed on judgements by knowledgeable people about the project's accomplishments.

This is the situation in the majority of the projects undertaken by governments and non profit organisations, many research and development projects undertaken by staff units, and projects whose subjective is to improve safety or eliminate environmental deficiencies.

Criteria for Selecting those that are to be Evaluated

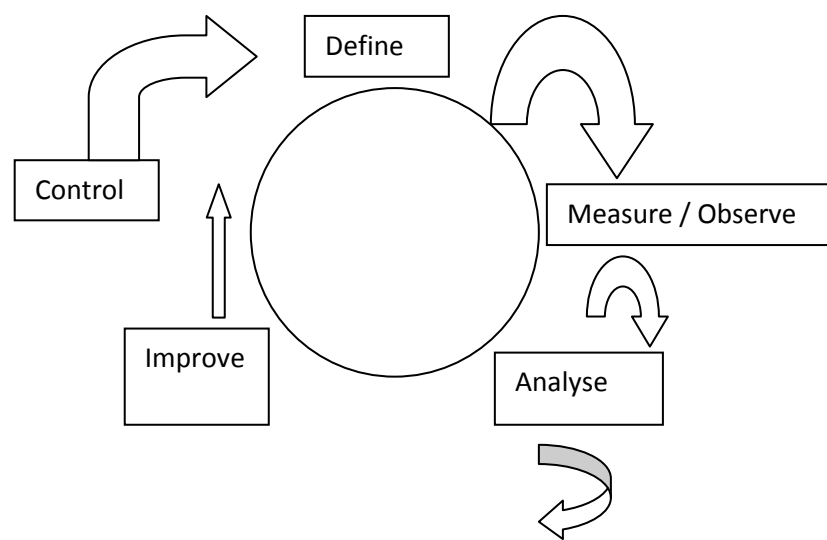
1. The project should be important enough to warrant the considerable expenditure of effort that is involved in a formal evaluation.
2. The results usually should be quantifiable. Specifically, if the project was intended to produce a specified amount of additional profit, the actual profit attributable to the project should be measurable.
3. The effects of unanticipated variables should be known, at least approximately, and they should not swamp the effect of changes in the assumptions on which the project was approved. If the results of a new product introduction were unsatisfactory because the market for the product evaporated, not much worthwhile information can be learned from an evaluation.

4. Results of the evaluation should have a good chance of leading to action. In particular, the analysis may lead to better ways of proposing and deciding on future projects.

Lesson 5.2 - Process of Designing Controlling System

The Twelve Step Process of Designing Control System

The ultimate idea of the control system would be to enable one to perform the steps is shown as the DMAIC process in diagram.



The DMAIC Process

Step 1

The first step in the process of designing control systems is to attentively hear the client's needs. Active listening, effective questioning, conceptualization of vague situations, and clarifying are first necessary steps in any type of consultancy task and any consultancy style. Also suspend your judgment so that you can take in the views freely without your own personal bias. Make notes carefully.

Step 2

The next step is to attempt to mentally fit the whole project in a holistic framework or sectional framework or with a zero based approach,

as if what currently exists either needs to be ignored, or it should improve the present situation.

While it would be useful to mentally size up the holistic goals of the organization, it may make the project more tractable if only a pragmatic partial issue is tackled right way. As Martin Kenneth Starr, the systems theorist mentions, it would be quite legitimate for parts of the system to be taken up for independent study and design as together they make the problem too complex.

At this stage, we need to decide the style we would like to adopt:

1. That of an expert, used specially by IT consultants who tell what to do based on their experience
2. The doctor-patient model, where you are an expert but you need considerable assistance to understand the symptoms of the organization
3. The helping model, to develop alternate approaches for the consideration of the organisation

The choice of the model depends on the status, knowledge, and reputation of the consultant and the attitude of the client, as well as on whether it is an operational consultancy, process consultancy or a financial consultancy, any of which a consultancy can be. Tom Lambert asks somewhat analogously for an early decision as to whether one will be an advocate, an expert, a trainer or an educator.

A student doing a summer project would function more effectively if he were deliberately more modest and chose to adopt the helping model. Those who took a more aggressive stance have most often fallen foul of the organisations.

Step 3

The next step is to clearly frame the objectives of the exercise. There should not be any commitment on the means to achieve the objectives. This is the stage at which one should have an understanding of the formal as well as the implied 'strategy' of the organisation, which is often hidden

from the consciousness of its members and has to be ferreted out and clarified.

Step 4

Step 4 should be a workshop in which a conversational style should be encouraged and the persons at all hierarchical levels are encouraged to speak out on the objectives and the means to achieve them. Do not express your own views too soon as it inhibits free thinking by others and will further have your own bias in it.

Step 5

Form the database and make a chart of flow of transactions. Suitable computer software for this is available and should be used profitably.

Step 6

Identify critical indicators and compare it with the advice obtained earlier at step four.

Step 7

Decide on the measurement and, or observational methods of inputs and outputs.

Step 8

Analyse the data with reference to these measurements and observations.

Step 9

Discuss the findings.

Step 10

Prepare a draft report with alternative remedies and discuss.

Step 11

Redraft the report.

Step 12

Submit final report to the management.

Future of Management Control Systems

As organizations mature and as environments change, managers must expand and refine their management control tools. The management control techniques that were quite satisfactory 10 or 20 years ago may not be adequate for many organizations today.

A changing environment often means that organizations must set different goals or key success factors. Different goals create different actions and related targets as well as different benchmarks for evaluating performance. Obviously, the management control system must evolve, too, or the organization may not manage its resources effectively or efficiently. Certain management control principles that will always be important or that can guide the redesign of systems to meet new management needs follows.

1. Always expect that individuals will be pulled in the direction of their own self-interest. You may be pleasantly surprised that some individuals will act selflessly, but management control systems should be designed to take advantage of more typical human behaviour. Be aware that self-interest may be perceived differently in different cultures.
2. Design incentives so that individuals who pursue their own self-interest are also achieving the organization's objectives. If there are multiple objectives as in usually the case), then multiple incentives are appropriate. Do not underestimate the difficulty of balancing these incentives-some experimentation may be necessary to achieve multiple objectives.
3. Evaluate actual performance based on expected or planned

performance, revised, if possible, for actual output achieved. The concept of flexible budgeting can be applied to most goals and actions, both financial and non financial.

4. Consider non financial performance to be just as important as financial performance. In the short run the manager may be able to generate good financial performance while neglecting non financial performance, but it is not likely over a longer haul.
5. Array performance measures across the entire value chain of the company. This ensures that all activities that are critical to the long run success of the company are integrated into the management control system.
6. Periodically review the success of the management control system. Are goals being met? Does success in accomplishing an action mean that goals are being met, too? Do individuals have, understood, and use the management control information effectively?
7. Learn from the management control successes (and failures) of competition around the world. Despite cultural differences, human behaviour is remarkably similar. Successful applications of new technology and management controls may be observed in the performance of others.

Summary

Banking, and non banking finance, mutual funds and insurance have to depend very much on trust in their control systems. This arises because there is a practical, difficulty for those who control the flow of funds in these sectors in getting all the affected parties full participation in the decisions. Consequently, there is a large amount of control by regulatory authorities authorized by law. Profit centre concepts can be used in the finance sector, though there are major measurement problems.

Management control in service organisations is different from that in manufacturing organisations, primarily because of the absence of an inventory buffer between production and sales, because of the difficulty of measuring quality, and because service organisations are labour intensive.

Professional organisations do not have the dominant goal of return on assets employed; professionals' behavioural characteristics do not include attentions to costs, output measurements are subjective, and there is no clear line between marketing and production activities. Performance appraisal may be achieved by peer reviews; in any case it tends to be subjective.

Financial service organisations differ in two fundamental respects from industrial companies. First, there "raw material" is money. At any given time, the value of each unit of money in inventory is the same for all organisations, negating any need for control in this area; however, the cost of using money obtained from various sources varies considerably. Second, the profitability of many transactions cannot be measured until years after the commitment has been made, necessitating continual periodic audits. In particular, the financial services company is profitable only if the future revenues obtained from current loans, investments, and insurance premiums exceed the cost of the funds associated with these revenues (which is analogous to cost of sales in a manufacturing company) by an amount that is sufficient to cover operating expenses and losses.

Non-profit organisations lack the advantages for control that the profit measure provides; they must account for contributed capital, a category that rarely occurs in a business. Expenditure decisions are subjective for nonprofits; nevertheless, they have succeeded in becoming more efficient in response to shrinking sources of funds.

Non-profit organisations are categorized into six types and are shown that the control needs of each of them are different. The categories are – government and local authorities, non-profit organisations functioning in competition with profit organisations, donor funded organisations involved in charitable work, intermediation between the state and beneficiaries, development organisations, organisations that hold the fourth position between the state, civil society and markets and finally activist who wish to consciences.

The most important difference between the management control of ongoing operations and the management control of projects is that the ongoing operations continue indefinitely, whereas a project ends. The elements in the management control of operations recur; one leads to

the next in a prescribed way and at a prescribed time. Although some operating activities change from one month to the next, many of them continue relatively unchanged, month after month, or even year after year. By contrast, a project starts, moves forward from one milestone to the next, and then stops. During its life, plans are made, they are executed, and the results are evaluated. The evaluations are made at regular intervals, and these may lead to revision of the plan.

The lesson also explains how the multiple agenda of the state are incorporated in the strategic and management controls of state owned organisations the world over using the concept of performance contracting. These supplement profits with other parameters for control. In India, these are incorporated in memoranda of understanding (MOU). The systems in socialized medicines in the United Kingdom also provide several methods to incorporate the deficiencies of market driven factors. The cooperatives are shown as useful devices to empower the producers, the consumers are workers by them appropriate controls over the organisations, which is ultimately beneficial for it since it reduces transaction costs and increases trust in the conduct of business.

Self Assessment Questions

1. Explain how management control in service organisations is different from that in manufacturing organisations.
2. What is meant by Professional Service Organisations? What are its special characteristics? Explain the management control systems in them.
3. What is meant by Financial Service Organisations? What are its special characteristics? Explain the management control systems in them.
4. How would you apply management control systems in the banking sector?
5. Describe the system of insurance accounts.
6. What is meant by Non-profit Organisations? What are its special characteristics? Explain the management control systems in them.
7. Explain the legal environment of non-profit organisation.
8. What are the differences between management control of ongoing

operations and management control of projects?

9. Explain the Project control environment.
10. What are the steps in project control process?
11. Explain the Twelve Step Process of Designing Control System
12. Define Balance Sheet.
13. Explain the use of ABC costing information in management control.

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