**MBA 805**

Accounting is the major information system in any organization.

The information is for 3 purposes;

- Internal reporting to enable managers plan and control their routine operations.

- Internal reporting to enable managers in making non-routine decisions and formulating major plans and policies

- External reporting to shareholders, government, creditors and interested parties

Management accounting is the application of professional knowledge and skill in the preparation and presentation of accounting information in such a way as to assist management in the formulation of policies and in planning and controlling of the operations of the undertaking

Accounting information enables managers to

1) Know whether they are doing well or not

2) Decision making

3) Spot problem areas

**Management accounting report qualities**

- Factual

- Degree of detail

- Cost Benefit analysis

- Timeliness

- Method of presentation

- Ambuiguity

- Volume of content

**Difference between management accounting and financial accounting**

1) Users

2) Rules and regulations

3) Degree of detail: Financial accounting covers all operations whereas management accounting covers a segment of operations

4) Use of Estimates and approximation: Financial accounting[reduced and minimized] whereas Management accounting[maximized]

5) Objectives: Financial accounting [Comply with legal requirements and render account of stewardship] while Management accounting[Planning and control purposes]

Planning means setting objectives for the future and the means of attaining them.

Planning is divided into 3 types;

- Operational plans[short term]

- Tactical plans[medium term]

- Strategic plans[long term]

Decision making means choosing from among alternative courses of action that which seems to be the most effective and efficient.

**Characteristics of Decision Making**

- It deals with the future

- It arises when there is alternative

- It covers a time period

**Phases of Decision making**

1) Statement of Objectives

2) Determination of Objectives

3) Evaluation of alternatives

4) Selection of best alternative

5) Implementation

**Control**

It is the comparison of the actual results with plans and determination of the reason for deviation from plans (if any).

The management accountant collects, organizes and presents information for management processes.

|  |  |
| --- | --- |
| Managerial activity | Accounting activity |
| Planning | Preparation of BudgetSetting up of standards |
| Decision Making | Providing data on alternativesAdvising on consequences of possible action |
| Control | Comparing actual results with Standards and BudgetInterpretation and identification of problem areas |

Information are facts, figures, Ideas, Observations, Expression, experience, Insights and relationships that enhance our understanding of a decision making situation.

Information is subdivided into 2 types;

-Quantitative [Tangible factors e.g. time, cost, revenue etc.]

-Qualitative [Intangible factors e.g. human factors, change in attitude etc.]

Information is to predict future circumstances.

Sources of information can be environmental or feedback.

Decision Support System(DSS) is a system to help in decision making.

Management Information System(MIS) can be described as a form of DSS

MIS consists of reports and models.

Information can be processed by human or machines.

Cost is the Economic value used in producing a product or service.

Cost Behaviour studies ways in which cost reacts or not reacts to an activity of an organization.

Level of activity is the amount of work done.

**Reasons for studying Cost Behaviour;**

1) Prediction to facilitate budgeting and corporate planning

2) Performance evaluation

3) Estimation of cost for decision making processes

Fixed cost do not vary with output or production level and remains constant in a given short term period.

Step cost is a variant of fixed cost. They are fixed and changes over a period e.g. Salary, Rent, value of a car etc.

Variable cost vary with volume of output.

Total cost is the addition of total variable cost + total fixed cost

y = a + bx

Mixed cost is semi-variable or Semi-fixed cost

**Cost Estimation methods**

- Scatter graph method

- Least Square

b = $\frac{∑xy - n\overbar{x}\overbar{y}}{∑x^{2} - n(\overbar{x})2}$

a = $\overbar{y} - b\overbar{x}$

- High and low method

- Statistical approach

- Account analysis approach

- Break Even Analysis: It is a term given to interrelationship between cost and profit.

 Areas of application are;

 1) For budget and planning

 2) For determining optimum production and sales mix

 3) for determining pricing and sales value decision

 4) For determining effect of capacity utilization on cost

- Marginal Costing: It Considers variable cost as product costs and writes off fixed cost. It is appropriate for short term decision making.

 *Advantages*

 1) Simple to Operate

 2) Less Expensive

 3) Fixes selling price knowing Production value

 4) Provides information about goods to be manufactured and the ones to be procured.

 *Disadvantages*

 1) Selling price should not be fixed

 2) Cost per unit of direct labour increases as production increases

 3) Periods are ignored

 4) Ignored fixed cost increases as production increases

**Chapter 10 - Marginal costing technique and management decision making**

One of the functions of management is decision making.

It involves the selection of a course of action from many set of alternatives.

There must be at least 2 alternatives.

The most useful contribution of marginal costing is the assistance it renders to management during vital decision making. Many factors both qualitative and quantitative would provide information for many decisions.

**Stages in decision-making**

- Defining the problem

- Identifying various alternatives

- Determining relevant cost and revenue data

- Evaluating the data

- Consider non — cost factors like quality of product, employee morale, etc

- Making a decision

**Basic assumption of marginal costing techniques**

Marginal costing is based on the assumptions of cost behaviour;

- Period fixed costs which are constant amounts, and no matter what the volume of sales and production is (provided that operation is within a relevant range). It follows that by making and selling one extra unit of a product, total cost will rise only by the variable cost i.e. the marginal cost of production for that unit.

- Similarly, total cost will 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 of output is the extra

revenue from sales minus the variable cost of the unit.

- As the volume of activity increases, there will be an increase in total profit, which is equal to the total extra revenue minus total extra variable cost. This is the additional total contribution from the extra output and sales.

- Contribution is described as "contribution towards the recovery of fixed period costs and making profit". The total profit in a period is the total revenue minus the total variable costs of goods sold minus the total fixed cost of the period.

**Qualitative and quantitative factors in decision making**

*Qualitative factors*

These are those whose measurement in naira value is difficult and in — precise, yet a qualitative factor may easily be given more weight than the cost — savings analysis.

For example, a decision to manufacture some products components at a cost below supplier quotation may be rejected because of the following:

- A long term dependence on the supplier for other important sub — assemblies

- The quality of the component produced by the supplier vis — a— vis internal

 production

- Reliability of the supplier

- Possibility of alternative ways to which internal facilities could be utilized, if purchase is

 made from outside.

- The dangers associated with the release of the company's trade secrets

- The volume that is required both in the short run and long run may not justify investment in internal production.

*Quantitative factors*

These are those that may easily be reduced to terms of naira and kobo such as projected alternative cost of materials, direct labour and overhead. The accountants, statisticians and mathematicians increasingly try to express as many decision factors as possible in quantitative terms. This approach tends to reduce the number of quantitative factors to be judged.

**Types of Cost**

*Relevant costs* —these are expected future costs that will differ under different alternatives.

The function of decision-making is to select courses of action for the future. So, a key question in determining relevant cost is "what difference will be made".

*Historical costs* — these are past costs i.e. already incurred, and are also referred to as sunk costs and are therefore irrelevant in decision-making.

*Avoidable costs (additional cost) -* All cost that would be avoided and all revenues, which would be forgone if that particularalternative were not adopted, are relevant costs and revenues. It follows therefore thatavoidable costs are "incremental costs" or "additional costs". Any cost which will remainconstant in amount whichever alternative is adopted is not relevant and should not beconsidered at all, and therefore ignored.

*Opportunity costs -* Opportunity cost is always a relevant cost when the problem facing the firm is a problem ofchoice. Opportunity cost is defined as the "best alternative foregone". This is because the bestalternative could have been the next choice if the first choice was not made.

The following list would .enable you to identify the opportunity cost in any circumstance:

- It does not involve future cash flows

- It is not in any way based on historical or acquisition cost of the resource

- There is no opportunity cost for something not possessed

- The resource should be limited in supply before it can have an opportunity cost.

- It is the net realizable value of the asset if the asset could be sold.

- It is the rental value of the asset, if the asset could be hired out.

- It is the transfer value of the asset, if the asset could be put into alternative use within

 the company.

- If the asset or resource can be sold, rented or put into alternative use, the opportunity cost is the best foregone alternative

Opportunity costs are imputed cost.

**Chapter 11 - Application of marginal costing technique to make or buy decisions**

**Make or buy decisions**

This type of decision problem occurs when management is contemplating on whether a component part used in the production of a main product should be manufactured internally or purchased from outside suppliers.

**Chapter 12: Application of marginal costing technique to product profitability decisions**

**Product profitability decision**

This type of problem arises when management is in a dilemma as to whether a product or a department that is presently making a loss should be discontinued or not.

An optimal decision cannot be made on the basis of financial report prepared by the financial report prepared by the financial accountant due to the reason of arbitrariness involved in the allocation apportionment and absorption of fixed overheads.

A marginal costing report has to be prepared to highlight the contribution emanating from

the product line or department before an optimal decision can be made.

**Decision Rule**

- If the product shows a positive contribution towards the recovery of general

 fixed costs, do not discontinue.

- If the product shows a negative contribution towards the recovery of general

 fixed costs, drop the product line.

- Consideration must be given to qualitative factors before the final decision can be

 taken.

**Format**

|  |  |
| --- | --- |
|  | **N** |
| **Total sales** | \*\*\* |
| **Less: variable cost** | \*\*\* |
|  |  |
| **Variable contribution** | \*\*\* |
| **Less: Attributable fixed cost** | \*\*\* |
|  |  |
| **Total contribution** | \*\*\* |

**Chapter 13 - Budgeting and Budgeting control**

A budget is a plan relating to a period of time expressed in quantitative terms.

This budget reveals the following characteristics of a budget:

- A budget may be expressed in monetary terms and or non — monetary terms like units of products, units of time, number of employees etc.

- A budget is concerned with a definite future period, and is therefore, prepared in advance of the period during which it is to operate.

- The purpose of a budget is to implement the policies formulated by the management

 for attaining the given objectives.

**Concept of budgeting control**

Budgetary control is a system of controlling costs, which includes the preparation of budgets.

Budgeting is thus only a part of the budgetary control.

Budgetary control is "the establishment of budgets relating to the responsibilities of executives of a policy and the continuous comparison of the actual with the budgeted results either to secure by individual action the objective of the policy or to provide a basis for its revision" The following characteristics of budgetary control can be noted;

- Establish a budget or target of performance

- Record the actual performance

- Compare the actual performance with that budgeted

- Establish the differences and analyze the reasons for them

- Act immediately, if necessary, for corrective actions to be taken

**Objectives of budgetary control**

The objectives of budgetary control are;

*To plan*: A budget provides a detailed plan of action for a business over a definite period of time. Detailed plan relating to production, sales, raw material requirements, labour needs, advertising and sales promotion performances, research and development activities, capital and additions etc. are drawn up. By planning, many problems are anticipated long before they arrive and solutions can be sought through careful study.

*To coordinate:* Budgeting aids mangers in coordinating their efforts so that objectives of the organization as a whole are harmonized with the objectives of its constituent parts. Effective planning and organization contribute a lot in achieving coordination. For example, coordination requires that purchase managers integrate their plan with production requirements and the production managers use the sales budget to help them anticipate and plan for the manpower and plant facilities required.

*To communicate*: A budget is a communication device. The approved budget, showing in detail the plans of the management, will not be carried out unless the organization understands what the plans are. Copies of the budgets may be distributed to all management staff which will serve to provide not only adequate understanding and knowledge of the programmes and policies but also to give a knowledge about the restrictions to which the organization is expected to adhere.

For example, the maximum amounts that can be spent on advertisements, maintenance etc., will be brought to the attention of the executives concerned.

*To control*: Control is the action necessary to ensure that plans and objectives are being achieved Control as applied to budgeting, may be thought of as a systematized effort aimed at keeping management informed of whether predetermined plans are being achieved or not. Control comes through variance analysis and reporting.

*To motivate*: Individuals in the organization are motivated by careful setting and communication of targets.

**Advantages of budgetary control**

The following are the advantages derived from budgetary control;

*Planning* — It provides a well-organized plan based on facts. It provides definite objectives with regard to figure operations. At the same time, executive policies for the future are formulated.

*Control* - It enables management to control each faction or department in order to attain the best possible result by each department. This is done by continuous comparison of actual against plan indicating where control is needed.

*Coordination* — It promotes and encourages coordination between departments of a business, for the attainment of the overall good of the organization.

*Cost consciousness* — The existence of budgetary control makes management to become more cost conscious and this can help to eliminate waste and inefficiency.

*Management by Exception* — Management precious time can be saved and attention directed to areas of more pressing and difficult — areas by the exception principle which is the essential feature of budgetary control.

*Responsibility of management*—It enables responsibility of each manager to be clearly established.

*Measurement of performance* — It provides a means of measuring the performance of individual managers and the various cost centers or departments by comparing targets (budget) against which the performance of managers can be assessed.

*Communication and motivation* — Preparation of budgets involves communication between top management and lower levels on how to attain the objectives. Reasonable agreement motivates managers to achieve the target set.

*Prevention of waste* - budgetary control prevents waste of physical resources such as labour, equipment, machinery etc. Duplication of efforts is avoided since the most efficient and effective use of these resources is specified in the budget.

*Authorization and Delegation* - Approval of the master budget explicitly and expressly authorizes the policy represented by the budget, and by accepting their budgets, the responsibility for carrying out the policy can be delegated to individual managers.

**Limitations of budgetary control**

Budget is not a cure —all for organization ills. Budgetary control system suffers from certain limitations, and those using the system should be fully aware of them. The main limitations are:

*The budget plan is based on estimates*: Budgets are based on forecasts and forecast estimates cannot be an exact science. Absolute accuracy, therefore, is not possible in forecasting and budgeting. The strength or weakness of the budgetary control system depends to a large extent, on the accuracy with which estimates are made. Thus while, using the system, the fact that budgets are based on estimates must be kept in view.

*Danger of rigidity:* A budget program must be dynamic and continuously deal with the changing business conditions. Budgets will lose much of their usefulness if they are not flexible and revised with the changing circumstances.

*Budgeting is only a tool of management*: Budgeting cannot take the place of management. The budget is a means to an end and not an end in itself. Sometimes, it is believed that the introduction of a budget program is alone sufficient to ensure its success. The execution of a budget will not occur automatically. It is necessary that the entire organization must participate

enthusiastically in the program for the realization of the budgetary goals.

*Expensive technique:* The installation and operation of a budgetary control system is a costly affair as it requires the employment of specialized staff and involves other expenditures so much that small business concerns may find it difficult to adopt it . However, it is essential that the cost of introducing and operating a budgetary control system should not exceed the benefits to be derived from it.

*Budgets are developed round existing organizational structures, which may be inappropriate for current conditions.*

*Budgetary control lowers morale and productivity since clear and realistic objectives of desired performance may be difficult to establish.*

**Chapter 14 - Budget and Budgetary control (continued)**

**Considerations in the installation of a budgetary control system**

1. Creation of budget centers

2. Introduction of adequate accounting records

3. Preparation of an organization chart

4. Establishment of Budget Committee

In large organizations generally, the direction and execution of the budget is delegated to a budget Committee, which reports directly to the top management. The financial controller is usually appointed to serve as the budget director. He would be in charge of preparing the budget manual or instruction, and accumulates the budgeted and actual figures for reporting. Other members of the budget committee usually comprise of various heads of functional departments, like the sales manager, purchase manager, production manager, personnel manager, chief accountant etc Each member would prepare his/her own departmental budget(s), which will then be considered by the committee for coordination.

The main functions of a budget committee are;

- To provide historical data to all departmental heads to help them in estimations

- To issue instructions to departments regarding requirements, dates of submission of estimates etc.

- To define the general policies of the management in relation to the budget system

- To receive budget estimates from various departments for consideration and review

- To discuss difficulties with departmental heads and suggest possible revisions

- To evaluate and revise the estimates before preparing the final budget

- To make recommendations on budget matters where there is a conflict between departments

- To prepare budget summaries

- To prepare a master budget after functional budgets must have been approved

- To inform departmental head of any revisions made in their budgets by the committee

- To coordinate all budget work

- To analyze variances and recommend corrective action, where necessary.

5. Preparation of Budget Manual

A budget manual is defined as "a document which sets out the responsibilities of the persons engaged in the routine of and the forms and records required for budgetary control".

A budget manual is thus a statement of budget policies and lays down the details of the organizational set up with duties and responsibilities of executives, including the budget committee and budget director and the procedures and programmes to be followed for developing budgets for various activities.

The contents of a budget manual are summarized as follows:

- Description of the budget system and its objectives

- Procedure and forms to be used in budget preparation

- Responsibilities of operational executives, budget committee and budget director

- Budget calendar, specifying definite dates for the completion of each part of the budget

 and submission of the reports

- Method of accounting and accounting codes in use

- Procedures to be adopted in operating the system

- Following up procedures

6. Budgeting period

7. Determination of Key Budget Factors

Key budget factors are also referred to as "limiting factors", "governing factors" or "principal budget factor". The key factor means the factor, which limits the size of output It is defined as 'The factor the extent of whose influence must first be assessed in order to ensure that functional budgets are capable of fulfillment". Such a factor is of vital importance and affects all budgets to a large extent.

The key factor serves as the starting point for the preparation of budgets. For instance, when sales potential is limited, sales become the key factor. Therefore, sales budget should be prepared first. Production and other budgets will then follow the sales budget. Thus a key factor

determines priorities in functional budgets. Among the various key factors which affect budgeting are the following:

(a) Sales:

 - Low market demand

 - Shortage of experienced salesmen

 - Inadequate advertising due to shortage of funds

(b) Materials:

 - Availability of raw materials

 - Restrictions imposed on import licenses, foreign exchange allocation etc.

(c) Labour:

 - General man-power shortage

 - Shortage of specialized labour in a particular process

(d) Plant:

 - Limited plant capacity

 - Bottlenecks in certain key process

It is possible that more than one key factor is operating at the same time. Under such conditions, the relative impact of factors is considered in budget preparation. Moreover, key factor is not necessarily a permanent factor. The management may be provided with opportunities to overcome the limitation imposed by key factors. For example, plant capacity can be increased by the installation of new and improved plant and machinery, which may be financed by the issue of new shares or by lease agreement.

**Forecasting and Budget Compared**

It is important to note the distinction between a forecast and a budget.

A forecast is a prediction of what will happen as a result of a given set of circumstances.

It is an assessment of probable future events.

A budget, on the other hand, is a planned result that an enterprise aims to attain. It is based on the implications of a forecast. Forecasting thus precedes the preparation of budgets. The main

distinction between the two is that forecast is concerned with "probable events" whereas budget relates to "planned event".

**Chapter 15 - Budgets and Budgetary control continued**

*Functional Budgets*

A functional budget is one, which relates to a function of the business e.g. sales, production etc all the functional budgets are summarized into what is known as a "master budget." These functional budgets are therefore subsidiary budgets of the master budget.

*Sales Budget*

The sales budget is not only the most important but the most difficult to prepare. The importance of this budget arises from the fact that if sales figures are incorrect then practically, all other budgets will be affected. The sales budget is a statement of planned sales in terms of quantity and value and analysis byproducts. It forecasts what the company can reasonably expect to sell to its customers during the budget period. The sales budget can be prepared to show sales classified according to products, salesmen, customers, territories, period, etc.

*Production Budget*

The production budget is an estimate of production for the budget period. It is first drawn up in quantities of each product and when the remaining budgets have been compiled and cost of production calculated, then the: quantities of production are translated into money terms, and what, in effect, becomes a production cost budget. The production budget is the initial step in budgeting manufacturing operations. There are at least three principal budgets related to manufacturing in addition to production budget. These are raw materials budget, labour budget and production overhead budget.

*Raw Material Budget*

The raw material budget shows the estimated quantities of all raw materials and components needed for the output demanded by the production budget. The raw material budget serves the

following purposes:

- It assists the purchasing department in planning the purchases

- It helps in the preparation of purchase budget

- It provides data for raw material control

It should be noted that raw material budget generally deals with only the direct materials. The indirect materials are generally included in the overhead cost budget

*Purchase Budget*

Careful planning of purchases offer one of the most significant areas of cost saving in many concerns. The purchase manager should be assigned the direct responsibility for preparing a detailed plan of purchases for the budget period and for submitting the plan in the form of a purchase budget.

These are planned purchases, to be made during the period to meet the needs of the business.

It indicates;

- The quantities of each type of raw material and other items to be purchased

- The timing of purchases

- The estimated cost of material purchases

*Labour Budget*

The labour budget represents the forecast of labour requirements to meet the demands of the company during the budget period. This budget must be linked with production and production cost budget. The labour budget serves the following purposes;

- To estimate the labour cost of production

- To determine the direct labour required in terms of labour hours and hence the number and grade of workers required to meet the production requirements

- To provide data for managerial control of labour cost

- To provide the personnel department with personnel requirements so that it may plan recruitment activities

*Production Overhead Budget*

The production overhead budget represents the forecast of all the production overheads to be incurred during the budget period. The fact that overheads include many dissimilar types of expenses creates problems in;

- The allocation of production overheads to products manufactured

- Control of production overheads

*Selling and Distribution Cost Budget*

This is concerned with the sales budget and represents the forecast of all costs incurred in selling and distributing the company's products during the budget period. As a general rule, the sales budgets and the selling and distribution cost are prepared simultaneously, since each has an impact on the other.

*Administration Cost Budget*

This budget represents forecast of all administration expenses like directors' fees, managing directors' salary, office lighting, cooling and air — condition etc. Most of these expenses are fixed within defined line, and SQ, should not be too difficult to forecast.

*Capital Expenditure Budget*

This budget represents the estimated expenditure on all fixed assets during the budget period. It includes such items as new buildings, machinery, land, and intangible items like patients etc.

*Cash Budget*

The cash budget is one of the most important and one of the last to be prepared. It is a detailed estimate of cash receipts from all sources and cash payments for all purposes and the resultant cash balances during the budget period. It makes certain that the business has sufficient cash available to meet its needs as when these arise. It is a device for coordinating and controlling the financial side of the business to ensure solvency and provide a basis for planning and financial requirement to cover up deficiency in cash. Cash budget thus plays an important role in the financial management of a business undertaking.

The main purposes of cash budget are outlined below:

- It ensures that sufficient cash is available when required

- It indicates cash excesses and shortages. So that action may be taken in time to invest any excess cash or to borrow finds to meet any shortages

- It establishes a sound basis for credit

- It shows whether capital expenditure may be financed internally

- It establishes a sound basis for control of cash position

**Chapter 16 - Budget Improvement techniques**

These techniques include;

**Flexible Budgeting**

This recognizes the existence of fixed, variable and semi—variable costs and it is designed to change in relation to the actual level of activity of a period. Fixed budget on the other hand cannot be adjusted to the actual volume of output or level of activity attained in a period, which would probably be different from the level of activity originally planned.

It should be noted that a fixed budget is essentially useful for planning purposes. A flexible budget on the other hand is a more dynamic tool used for control purposes.

**Rolling or Continuous Budget**

A rolling budget can be defined as the continuous updating of a short term budget by adding say a month or quarter and deducting the earliest month or quarter so that the budget can reflect current conditions. Thus, a rolling budget is a device, which attempts to help an organization to overcome the problems resulting from frequent unexpected or unforeseeable activities or future cost.

A rolling budget is therefore an attempt to prepare targets and plans, which are more realistic and certain. By shortening the period between preparing a budget annually, then there would be budgets every 2, 3, or 4 months. Each of these budgets will plan for the next 12 months so that the current budget is extended by an extra period as the current period ends, hence the name continuous or rolling budget.

Suppose, for example, that a continuous budget is prepared every three months, the first three months will be prepared in great detail and the remaining nine months in lesser detail because of the greater uncertainty about the longer term future.

*Advantages of Continuous Budget*

- At all times, figures for the next twelve months are available and management is made continually to be aware of the budgetary process.

- Whereas as twelve months budget becomes outdated when there is a rapid inflation, a continuous budget system allows for more frequent re — assessment and revisions in the light of inflationary trend.

- Management is able to concentrate on a suitable management time span, which it can visualize and for which it can be fairly held responsible.

*Disadvantages of Continuous Budget*

- Higher cost and effort required for continuous budgeting

Each period, the whole procedure of preparing budget has to be undertaken. It would be expected that company objectives and limiting factors will be more critically assessed on an annual basis than when the assessment is required twelve times or four times in a year.

If the budget is built up from basic standard costs, there may be four changes each year in standard product cost assuming a three monthly rolling budget As a result, valuation of closing stock, pricing of materials issues etc. would become more complex.

- How is the period to be covered decided? Would it be for a quarter or a month? Would the shorter period justify the extra work?

**Zero Based Budgeting (Z.B.B)**

ZBB implies that the budget is started from a zero situation and justifies each segment of the budget rather than merely adding to historical budgets or actual budgets. Conventionally, budgets are only queried when they show increases in expenditures over previous years. In ZBB, there should be a possible attempt to eliminate inefficiency and slack from current expenditure.

ZBB was the brainchild of Peter A. Pyhrr. He identified the following structured and systematic approach to budgeting based on ZBB.

- Organizations are divided into small sections known as decision units.

- Each decision unit is clearly defined.

For each activity, a decision package is defined for the minimum level of spending and this sets out the cost, the purpose of the activity, possible measures of performance, consequences of not performing the activity, etc.

Similar decision packages are defined for incremental allocations for alternative methods of performing the activities.

Decision packages are specified for alternative methods of performing the activities.

The decision packages are ranked.

Resources are allocated and a budget formulated from the priorities that have been identified.

The actual usage of resources and the actual performance of the decision units are monitored as it is with other budgeting systems; deviations from budgets are investigated where significant and appropriate actions taken.

A decision package is really the foundation of the ZBB system, Phy-rr defines it as a document that identifies and describes a specific activity in such a manner that management can:

Evaluate it and rank it against other activities competing for the same or similar limited resources.

Decide whether to approve it or disapprove it.

*Advantages of ZBB*

1. Efficient allocation of scarce resources, and inefficiencies, which are perpetuated by the incremental approach to budgeting are avoided.

2. Cost reduction may also be effected.

3. Management attention is focused on activities, which warrant action.

4. Activities are evaluated and justified.

5. Performances of managers can be more effectively monitored.

6. Management cooperation and involvement is stimulated.

*Disadvantages of ZBB*

1. Extra paper works are created by the decision packages

2. ZBB is more applicable to only discretionary cost items. Such as research and development training etc.

3. Completely ignoring the present state and the past may induce assumptions impossible to achieve

4. Initial cost associated with re—organization and employee education could be prohibitive.

5. It encourages the false idea that all decisions have to be made in the budget. Management must be able to meet unforeseen opportunities and threats at all times and must not feel restricted from carrying out new ideas simply because they were not approved by decision package cost/benefits ranking analysis.

*Planning and Programming Budgeting System (PPBS)*

PPBS is constructed on a few basic concepts which need definition before hand. They are:

- Ob j e c t i v e s

- Program

- Resources

- Effectiveness

**Objectives**

These are the organizations aims or purpose, which collectively define its main reason for existence.

**Program**

These are the set of activities undertaken to accomplish the objectives.

**Resources**

Resources are the goods and services consumed by program activities. They may be thought of as equipment, materials and men requited to produce each programmes end — product Programme cost is the monetary value of resources identified with a programme.

**Effectiveness**

Effectiveness is a measure of the degree to which programmes accomplish objectives.

**Features of P.P.B. System**

The planning phase of the PPBS is concerned with identifying and defining objectives, "Programming" then groups the organizations activities into programmes that can be related to each objective.

This requires grouping by end — product rather than by administrative or by function. This grouping then enables us to look at what we want to produce and the resources we require to produce them.

The programme budget presents resources and costs categorized according to the programme or end —product to which they relate. This contrasts with the traditional budget, which assembles costs by the type of resource input or by functions. The advantage of this restructuring of budget information is that it aids by fly, using attention on competition for resources among programmes and on the effectiveness of resources used within programmes.

PPBS requires a long term planning which covers at least five years and where appropriate should extend to ten, fifteen or more years into the future. This is intended to enable all costs and benefits of programme decisions to be realized within the planning period.

Comparability rather than accuracy is the main consideration in the analysis of programme costs and benefits. In addition, aggregate and not detailed data should generally be used in cost and benefit analysis Planning, not forecasting, is the purpose of PPBS. The aim is to examine the costs

and benefits for the future, of alternative courses of action.

Capital and operating cost implications of programmes are looked at together and not separately as in the traditional budget practice.

**Chapter 17 - Performance Evaluation in a divisionalised organisation**

**Levels of decision-making**

Management at all levels makes decisions. The levels of decision-making in an organization are:

- Strategic

- Tactical

- Operational

**Strategic level**

The board of directors will have jurisdiction on decision bothering on the following:

- Diversification of the company's product

- Acquisition of a subsidiary

- Appointment of top executives

- Specified areas of capital expenditure acquisition and disposal

- Raising of finance and investment of surplus fund

- Determination of overall objectives

- Specification of areas of research and development

- Centralized services and activities e.g. legal services and projection of overall image

 via press etc.

- Monitoring of overall objectives

- Product line closure or departmental closure decisions

- Arbitration decisions if transfer pricing between divisions is involved

- Company sourcing decisions: where more than one division use the same raw

 materials components, part etc. corporate interests may be best served by making

 this a strategic activity

**Tactical Level**

Divisional managers, production controllers, sales managers etc. will have jurisdiction of decisions bordering on the following:

- Advertising campaign

- Product selection

- Appointment and dismissal of junior and intermediate staff

- Transfer pricing decisions excluding arbitrary transfer method imposed by central management

- Production methods

- Plant replacements and disinvestments — although with some constraints e.g. all such items with a maximum limit of say N100, 000

- Purchasing management

- Short-term operational decisions, such as sub- contracting work, over-time working, productivity standard setting etc.

- Guaranteeing or suspension of credit to customers

**Operational level**

Credit supervisors, work foremen etc., will have jurisdiction on decision bordering on the following;

- Maintenance or suspension of deliveries of bad customers

- Selection of men to deal with a particular job etc.

**Importance of organizational structure in decision-making**

Where there is no organizational structure, there will be no distinction between the different levels of decision-making, and all decisions will be made at just one point close to the top management and this is absolute centralization.

On the other hand, where there is a highly structured organization and no decision is taken at the strategic level but the bulk is passed down the ladder, then we talk of absolute decentralization.

*Centralization*

Centralization is the tendency to restrict delegation of decision-making in an organisation, usually by holding it at the top of the organisation structure i.e. at the strategic level.

*Decentralization*

Decentralization on the other hand is the tendency to disperse decision-making authority in an organization structure i.e. freedom is granted to subordinate officers to take decision.

Absolute centralization in one person is conceivable but it implies that there are no subordinate managers and therefore no structural organization. Consequently, it can be said that some decentralization characterizes all organizations. On the other hand; there cannot be absolute

decentralization, for if managers should delegate all their authority, then their status as managers would cease, their positions would be eliminated and there would, again be no organizations.

*Divisionalization*

A division is an investment center with responsibility for production, purchasing and marketing and whose head is given a degree of discretion as to what product to produce and sell, and at what price, what manufacturing operations to perform, what sales areas to serve, and what research to be undertaken.

Divisionalization involves the delegation of decision making powers to divisional heads and hence the divisions achieving some degree of autonomy.

A divisionalized company therefore, is one whose organisation and operations are segmented into semi-autonomous units, and each with a large degree of responsibility for decision making within its respective unit.

*Advantages of Divisionalization*

Better decisions

As the business grows in size of activities and personnel, the ability of an organization to make decisions effectively and quickly is reduced by its chain of command and span of control.

But by splitting the organization into smaller and more manageable units, the quality of decision making and management is improved. Top management work overload is also reduced so that they can focus their attention on strategic areas.

Cope better with changes

When a business operates in a stable environment, e.g. a stable sales market and a stable cost structure, many decisions can be made centrally at the planning stage. Management will normally find it unnecessary to respond speedily to unpredictable problems, what operating in a more turbulent environment, e.g. active competition, cost inflation, employee strikes etc.

Decisions cannot be predetermined at the planning stage. Local management, more fine tuning with, the problems (and better access to data) will be able to make correct and responsive decisions than central management.

Training

Through delegation of authority, subordinate are being groomed and trained for higher-level responsibilities.

Motivation

By assigning the responsibility of a division performance to, its management, there will be an improvement in its performance. This accords with the behavioural theory of Herzberg in which

responsibility is viewed as a "motivator" The opportunity for freedom from programmed decisions and detailed central control will clearly appeal to managers in large companies.

*Disadvantages of Divisionalization*

Increase in cost

Activities which are common to divisions can be more effectively centralized to save costs through economies of scale e.g. costs and running purchasing departments and billing bulk purchasing savings. Duplication of activities is required to effect a divisionalized structure, along with the costs of running a head office activity

Goal Congruence, dysfunctional behaviour and loss of control

When decisions are made centrally, their consistence with corporate objectives is more easily controlled. Within a divisionalized structure, divisional management is given freedom to decide (both correctly and incorrectly) and hence its decisions may not be congruent with the corporate goals. This is the goal congruence problem. Top management at the center will lose some degree

of control if autonomy is assigned to divisional management. This is the autonomy and control conflict.

Design of control System

To report on divisional managements decision-making and performance, an effective method of control will need to operate. Problems of design of divisional profit measure, methods of measuring performance of divisional managers and the cost of operating the system need to be considered.

*Management Accounting Problems of a Divisionalized organisation*

Divisionalized organization Infra — company transactions

Where one division is concerned with ensuring goods or services from another division, problems will arise in pricing such transactions. The management accountant will be actively concerned in ensuring:

- That the pricing system does not act to the detriment of the company's interest.

- That the transfer prices are fair to both parties

- That the negotiation and administration involved in transfer pricing are not disproportionate to the benefit from maintaining autonomous divisions.

Apportionments

Establishment of separate divisions usually involves apportionment and allocation of common cost and/or assets. The management accountant will aim at making such apportionments as equitable as possible.

Division's result may be materially affected by costs, which are outside the responsibility of the divisional manager such costs need to be identified for meaningful performance reports.

Designing effective control systems

There is the problem of communication depending on the degree of decentralization. There is also the problem of determining the form, content and periodicity of preparation of operating and budget statement; inappropriate to the different levels of management.

There should be general coordination between the units and the implementation of appropriate procedure to ensure as far as possible, uniformity in the classification and application of costs.

Evaluation of results

There is the problem of the appropriate technique to apply in evaluating the performance of the divisions.

**Chapter 18 - Performance Evaluation in a Divisionalized Organisation (continued)**

**Responsibility accounting**

Responsibility accounting is a system, which recognizes decision centers in an organisation and traces costs and revenues to the individual managers who are primarily responsible for making decisions about these costs and revenues.

**Objectives of Responsibility Accounting**

The objectives of responsibility accounting are two-fold;

- To state the overall plan or goal of the organisation in concrete terms and to assign responsibility for attaining the goal and sub-goals.

- To serve as a monitoring device during execution of the plan

**Features of the Responsibility Accounting system**

The areas involved in the application of the principles are:

- The determination of responsibility for each activity carried on in the enterprise and the assigning of each item of income, expense and other expenditures accordingly.

- Definition of the kind and amount of data each manager need and the reflection of these

 in accounting and statistical-classification.

- The use of management report to convey the data to those who will use and at the time they want it.

- Planning and budgeting practices made frilly compatible with the reports.

- The setting up of measures of performance to be incorporated in the reports and

 budget.

**Types of Responsibility Centres**

Three types of responsibility centers can be identified, namely:

*Cost Centre*

This is a department or section or function over which a designated individual has responsibility for expenditure. Cost centers are relatively simple and consist mainly of locations at which costs

can be separately identified and collected.

They are mostly used for cost control and can consist of a single person or machine. Provided that a cost number or job number is allocated, costs can be assigned thereto and separately recorded. For interdepartmental performance comparison, the unit of measurement of output is normally required although in its absence, the absolute total cost can be compared. It is necessary for each cost center to separate those costs that are directly controllable and accountable by the person responsible and those costs, which may be apportioned or allocated to the center e.g. computer costs, canteen expenses etc.

Another problem of cost center is the difficulty of identifying specific output levels to the cost incurred.

*Profit Centre*

This is a segment of a business entity by which both revenue and expenditures are controlled and accounted for it thus differs from a cost center in that the revenue also is accumulated and thereby a profit or loss is established within the given segment. The prime need is for there to be an ability to segregate a definable amount of sales generated by the particular segment. The person responsible for a profit center should have control over both the sales policy and the production facilities i.e. authority commensurate with responsibility

Problems of Establishing a Profit Center

- Segregation of sales by product lines of customers who take several products, and of identifying individual sales, if all invoicing is done by the national head office.

- Pricing of inter-departmental transfers when components or products are supplied between profit centers.

On the cost side, there would be the need to allocate, apportion and absorb corporate advertising, research and developmental expense and general administrative costs.

*Investment Centre*

This is a profit center controlling revenue and costs but which in addition, the profit is related to the assets employed in earning the profit i.e. returns are compared to investment. The prime need is the identification of the assets employed in the particular business segment or product line. Many assets may be in common use by several profit centers for example, factory building,

utilities, transport, materials and tools stores. Investment centers are likely to be larger than profit centers. An investment center may comprise several profit centers having control at a higher stage in the management structure.

Difficulties involved in the Establishment of Investment Centers

- The necessity to allocate all fixed assets in use.

- Difficulty in establishing a base to relate profit for interdepartmental comparison, whether the fixed assets should be stated at cost, at written down value or at replacement value.

- How would joint assets be allocated e.g. boiler plants canteen and sports facilities?

- Would assets include idle plant and incomplete construction?

- In making comparisons, would all segments be expected to make the same return on whatever asset base is chosen?

It is instructive to note that, while all investment centers are profit centers, not all profit centers

are investment centers. Divisions in a divisionalized organization are invariably investment centers.

**Measures of Divisional Performance**

*Absolute Divisional Profit*

This is the profit that arises from divisional operations. The profit achieved would be compared against a budget or target and variances in volume, prices and rate of expenditure would be brought under review. It is likely, since a division is not a completely independent business, that some cost will be charged to the division in respect of goods or services provided by other segments of the enterprise.

Some of these would be required by the divisional manager and will be charged at" arms length" prices. Others, however, will be apportionments of costs over which the divisional manager may have no control in the short term. For the purpose of judging the manager personal achievement, a" controllable profit" figure may be used prior to charging these "non- controllable costs".

*Net Profit*

This is revenue less divisional costs and apportioned head office costs. The divisional , manager is made aware of the fill cost of operating his division.

*Direct Profit*

This is revenue less direct cost of the division. The problem of apportioning head office costs to the division is avoided. Certain costs which are however directly traceable to the division, may not be controllable at that level e.g. divisional manager's salary.

*Controllable Profit*

This is revenue less costs controllable at the divisional level. The measure comprises only costs and revenue for which the divisional manager has primary responsibility It should be noted that fixed costs mien be controllable because they are, by definition, fixed in relation to activity and not in amount e.g. supervisor's salary. If an expenditure on fixed assets is decided on by head office management, depreciation charges on these assets will not be included in arriving at controllable profit.

*Controllable Residual Profit/Income*

This is revenue less divisional controllable costs and interest imputed on the investment controllable by the divisional manager. Here, the level of investment is assumed to be the responsibility of the divisional manager The difference between controllable profit and controllable residual profit is interest, which is imputed at the company's cost of capital on the amount of investment in the division.

*Net Residual Profit/Income*

This is revenue less total divisional costs, including imputed interest on the divisional investment and apportioned head office costs. This measure evaluates the investment in the division rather than the performance of the manager.

*Returns on Capital Employed (ROCE)*

ROCE is an all —embracing ratio that relates net income to the level of investments. The ratio is given as:

$$\frac{Net Income}{Sales} X 100\%$$

It can be sub-analyzed as:

$$Profit percentage= \frac{Net Income}{Sales} X 100\%$$

$$Asset turnover= \frac{Sales}{Investment} $$

Advantages of ROCE

- The data input is compatible with information contained in conventional financial reports and this facilitates easy interpretation of the ratio by managers because the ROCE ratio can be sub-divided into a series of explanatory ratios, it is a useful analytical device for examining various aspects of performance.

- It gives consideration to capital base of each division thereby regarding them as autonomous investment units.

Disadvantages of ROCE

- Definitions of profit are subject to accounting policies and the consistency in the application of the policies. Particular problems will arise in relation to:

 - Allocation of central overheads

 - Effects of taxation

 - Depreciation

 Similar to the problems of profit, definitions are those of determining the investment base. Various investment bases are;

 - Net book value

 - Gross book value

 - Current value

- Maximizing return on investment may lead divisional managers to disregard the interest of the organization as a whole and select projects, which will simply increase the divisional ROCE

- Although a single rate of ROCE would normally be calculated on the overall financial results of the business, it is important to recognize that individual projects or business activities may be achieving returns which are significantly different from the average.

- ROCE may not properly reflect the company's goals because it ignores nonmonetary objectives namely the employees growth in managerial skills and Social responsibilities of the company.

The different divisions engage in different activities and some lines of business generally yield higher returns than others. To this extent, using ROCE may perpetuate some divisions as "leaders" because of the peculiarities of their business, e.g. the rate of return for companies in capital equipment and construction is lower than that of companies selling to the consumer market.

*Residual Income*

Divisional residual income is divisional profit less an imputed charge on the net assets employed by the division. The rate of interest will normally be the required pre-tax rate of return of the enterprise as a whole, so that any residual income will indicate earnings in excess of the normal rate of return.

Using residual profit as a performance measure assumes that the level of divisional investment is a responsibility of divisional management. This should be contrasted with the view taken when. Absolute profit is used as a performance measure, that the investment level is a central strategic

responsibility. It combines the qualities of born an absolute and a relative measure. A positive residual income demonstrates that the required ROCE has been exceeded and measures the excess in absolute income terms. A numerical example will demonstrate the use of residual income as the performance measure will ensure that goal congruence between the division and the company is achieved.

Advantages of residual income

Residual income represents the total surplus of a division after all costs. Divisional management that maximizes residual income will behave consistently with the wealth optimizing corporate objectives rather than when they maximize ROA. Residual income therefore promotes goal congruence.

Residual income performance measures are reconcilable to techniques such as net present value (NPV) and internal rate of returns (IRR).

Disadvantages of Residual Income

Although central management may hire the idea of inputting a cost of local assets, they may not favour the assumption on investment powers contained within the residual income approach.

 Another disadvantage is that the thoughts of estimating the firm's cost of capital.

**Chapter 19 - Transfer of Pricing**

**Introduction to Transfer Pricing Systems**

In a large decentralized organization where internal transfer of goods and services occur, it would be necessary to attach monetary values to such exchanges and to evaluate the separate performances of the divisions or departments involved.

Transfer pricing is therefore the process of determining, reporting and acting on the imputed values of goods and services exchanged between divisions. It should be realized that a company cannot make a profit by selling to itself, hence these internal sales between divisions are regarded as "transfer" and the prices at which such "transfers" are made are known as "transfer prices".

To avoid transfer-pricing problem of arbitrary pricing between divisions, and for the purpose of optimal decision making by the various divisional management, the central management should properly define a transfer pricing policy to be used on a consistent basis by all the divisions within the decentralized organization.

**Goal Congruence**

A transfer pricing policy should enhance decision made at the divisional management level that would not only be beneficial to the division but to the whole organisation. The prices should be set in such a way that the divisional management's desire to maximize divisional returns is consistent with the objectives of the company a, a whole. The transfer prices should discourage sub-optimality in decision-making, Sub-optimality means the subjugation of corporate goals for divisional goals.

**Performance Appraisal**

The transfer prices should determine the contribution of each of the divisions towards profit & Performance evaluation emphasizes the point that, since profit is used to measure divisional performance, the transfer pricing system should be fair to both the buying and selling division. The transfer pricing system should form part of the management information system which will accomplish the following:

- Realistic assessment of the performance of each divisional management

- Evaluate the contribution made by the division to overall company's profits

- Assess the work of a division as an economic unit

**Divisional Autonomy**

The transfer prices should preserve the autonomy of divisions so that the benefits of decentralization (motivation, training ground, local problems, initiative etc.).

**Methods**

- Cost Based Transfer Pricing

- Market Based Transfer Pricing

- Negotiated Transfer Pricing

- Arbitrary Transfer Pricing

**Chapter 20 - Standard Costing Technique and Variance Analysis**

**Standard Cost**

The technique known as standard costing consists of pre-determined estimate of costs and the comparison of this with actual cost as they are incurred. The difference between the actual cost

and standard cost is termed variance. Variance analysis is used to attribute variances to the various causes. The Chartered Institute of Management Accountants in its official terminologies define standard cost as a predetermined cost of how much costs should be under specified work and conditions.

**Variance Analytics**

A Variance according to our discussions is the difference between standard 'cost and 'actual' cost. Variance analysis therefore is the process whereby the difference between standard cost and actual cost is sub-analyzed into their constituent parts.

**Types of standard**

*Basic Standards*

This is defined by the CIMA as a standard established for use over a long period from which a current standard can be developed. They are established for use unaltered over the years.

*Ideal Standards*

This is a standard which can be attained under the most favourable conditions i.e. a perfect world with a perfect efficiency.

**Factors in the determination of standards**

It is essential that all factors be considered in the determination of standards e.g. quantities, prices, rates, quality and grades. To be effective for analysis and control purposes, standards are only fixed for a certain period e.g. six months or a year. When changes in economic conditions occur, it is necessary to revise the standards e.g. wage increases material price increases.

**Cost control by means of standards**

In a manufacturing concern, the following steps should be taken when a standard cost system is applied;

- Determine standards for each cost element (material, labour and manufacturing overheads)

- Obtain actual results

- Compare actual and standard cost to determine variances

- State favourable and unfavourable variances on a variance report, and deal with them immediately

- Pinpoint responsibility for variances and obtain explanations

- Take corrective actions

**Advantages of standard costing**

- Standard costing serves as a criterion against which actual costs can be measured

- Analysis of variances necessitates regular control of the entire production process

- Use of standard costing reduces clerical work

- Interpretation of reports by management is simplified and requires less time

- Standard costing provides better control over costs. The objective is always to improve work performance and material consumption

- In order to establish standards, an extensive study of all facets of the organisation is required.

- Production and price policy can be formulated before starting operations

- When standards have been established, they can serve as a basis for further planning, which may lead to greater efficiency

- It is useful in motivating employees and achieving labour efficiency

- It is useful in setting prices in advance, mostly in making tender

**Disadvantages of standard costing**

It may be expensive and time consuming to install and maintain the system.

In an inflationary period or improving technological environment, standards quickly become obsolete and consequently lose their control and motivational effects.

**Material variances**

The total cost of material consumed in or purchases for manufacturing process are determined by two basic elements.

- The unit price paid for the material and (material price variance)

- The quantity of material consumed or applied.(material quantity variance)

The total variance between the standard and the actual material cost can be broken down into these two elements Where more than one type of material is used, a third variance is possible namely the variance between the standard mix and the actual mix.

Material price variances

The purchases department is concerned with the determination of standard prices. In forecasting average prices, due consideration must be given to large-scale purchases, market conditions, discounts and storage casts.

The standard price is used as a norm. If the actual price exceeds the standard price, the variance is unfavourable. If the actual price is less than the standard price, the variance is favourable.

*Causes of material price variance*

- Favourable or unfavourable terms of purchase contracts

- Unforeseen changes in market prices

- Higher or lower delivery cost

- Erroneous calculation of expected discounts

- Optimizing of purchases

Material Quantity variance

The standard type and quantity of material necessary to be converted into a finished product must be &tented. Provisions must be made for unavoidable waste, spillage or usages during the

production process. The design departure in cooperation with the factory staff must determine

the Material specifications, which serve as the basis for determining the standard quantity in manufacturing a completed unit.

The standard quantity is used as the norm if the actual quantity is more than the standard quantity, the variance is unfavourable, and vice-versa.

*Causes of material quantity variances*

- The use of a different grade or substitute material

- Improper or pact control over spillage and wastage of material

- Efficient or inefficient performance due to supervision, type of equipment, ability of workers etc.

**Labour Variances**

The elements are labour rate variances and labour efficiency variances.

*Causes of labour rate variances*

- Unforeseen changes in minimum wage rates

- Poor scheduling of production resulting in overtime

- Use of personnel on higher/lower wage grades performing certain functions in the manufacturing process

- Incorrect calculation of standard

The work-study department, by means of time and motion studies, determines the manufacturing labour cost of each cost centre. When standard time is calculated, provision must be made for unavoidable idle time.

It is based on the most efficient method according to which job to be performed. The standard time is used as a norm for determining the labour hours exceed standard hours, the variance is unfavourable.

*Causes of labour efficiency variances*

- Working conditions

- Redesign of products

- Efficient work planning

- Good or poor planning

- Good or poor supervision

- Well-trained or poorly trained workers

- Good or poor quality of materials resulting in more or less time spent in the processing thereof

- Problems with tools or machinery