Responsibility Centers: Revenue and Expense Centers
A responsibility center is an organization unit that is headed by a manager who is responsible for its activities. In a sense, a company is a collection of responsibility centers, each of which is represented by a box on the organization chart.
hierarchy

• These responsibility centers form a hierarchy
• At the lowest level are the centers for sections,
  – work shifts, and other small organization units.
• Departments or business units
  – comprising several of these smaller units are higher in the hierarchy
Nature of Responsibility Centers

• A responsibility center exists to accomplish one or more purposes,
  – termed its objectives.
• The company as a whole has goals,
• and senior management
  – decides on a set of strategies to accomplish these goals.
• The objectives of the company’s various responsibility centers
  – are to help implement these strategies
core operation of responsibility centers

• Responsibility centers receive inputs,
  – in the form of materials, labor, and services.
• Using working capital (e.g., inventory, receivables), equipment, and other assets, the responsibility center performs its particular function,
  – with the ultimate objective of transforming its inputs into outputs,
  – either tangible (i.e., goods) or intangible (i.e., services).
• In a production plant,
  – the outputs are goods.
• In staff units,
  – such as human resources, transportation, engineering, accounting, and administration,
  – the outputs are services
operation of responsibility centers
operation of responsibility centers

• The products
  – (i.e., goods and services)
• produced by a responsibility center
• may be furnished either to another responsibility center,
• where they are inputs,
• or to the outside marketplace,
  – where they are outputs of the organization as a whole.
• *Revenues* are the amounts earned from providing these outputs.
Relation between Inputs and Outputs

• Management is responsible for ensuring the optimum relationship
  – between inputs and outputs.

• In some centers, the relationship is causal and direct,

• As in a production department,
  – where the inputs of raw material
  – become a physical part of the finished goods
production department

• The control focuses on using
  – the minimum input necessary to produce the required output
  – according to the correct specifications and quality standards,
• at the time requested, and in the quantities desired.
Relation between Inputs and Outputs

• In many situations, inputs are not directly related to outputs.
• Advertising expense
  – is an input that is intended to increase sales revenue;
• but since revenue is affected by many factors other than advertising,
  – the relationship between increased advertising
    – and any subsequent increase in revenue
• is rarely demonstrable,
  – and management’s decision to increase advertising expenditures is typically based on judgment rather than data
R&D

- In research and development,
- the relationship between inputs and outputs is even more ambiguous;
- the value of today’s R&D effort may not be known for several years,
- and the optimum amount
  - that a given company should spend for R&D
- is indeterminable
Measuring Inputs and Outputs

• Much of the input that responsibility centers use can be stated as physical measurements:
  – hours of labor, quarts of oil, reams of paper, and kilowatt-hours of electricity.

• In a management control system these quantitative amounts are translated into monetary terms
Cost

• The monetary value of a given input is ordinarily calculated by multiplying a physical quantity by a price per unit
  – (e.g., hours of labor times a rate per hour).
• The resulting monetary sum is called “cost”;
• this is the way a responsibility center’s input is commonly expressed.
• *Cost is a monetary measure of the amount of resources used by a responsibility center*
Measuring Inputs and Outputs

• It is much easier to measure the cost of inputs than to calculate the value of outputs.
• Annual revenue may be an important measure of a profit-oriented organization’s output,
  – but that figure will not express all that the organization did during that year.
• Inputs such as R&D activity, human resources training, and advertising and sales promotion
  – may not affect output of the year in which they occur
Measuring Inputs and Outputs

• Nor is it possible to measure accurately
• the value of the work
  – done by a public relations department, a
    quality control department, or a legal staff
• In nonprofit organizations,
  – there may be no quantitative measure of
    output whatsoever;
Efficiency and Effectiveness

- The concepts of input, output, and cost can be used to explain the meaning of **efficiency** and **effectiveness**, which are the two criteria by which the performance of a responsibility center is judged.
- These terms are almost always used in a comparative, rather than an absolute, sense.
Efficiency and Effectiveness

• We do not ordinarily say that
• Responsibility Center A is 80 percent efficient;
  – instead, we say that it is more (or less) efficient than its competitors, more (or less) efficient now than it was in the past, more (or less) efficient compared to its budget,
  – or more (or less) efficient than Responsibility Center B.
Efficiency

• *Efficiency is the ratio of outputs to inputs, or the amount of output per unit of input.*

• Responsibility Center A is **more efficient** than Responsibility Center B
  – (1) if it uses fewer resources than Responsibility Center B but produces the same output or
  – (2) if it uses the same amount of resources but produces a greater output
efficiency

• In many responsibility centers,
• efficiency is measured
  – by comparing actual costs
  – with some standard of what
• those costs should have been at the measured output
efficiency

Though this method can be somewhat useful, it has two major flaws:

• (1) Recorded costs are not precise measures of the resources actually consumed,

• (2) the standard is merely an approximation of what ideally should have happened under the prevailing circumstances
Efficiency vs. *effectiveness*

- In contrast to efficiency,
  - which is determined by the relationship between input and output,
- *effectiveness*
  - is determined by the relationship between a responsibility center’s output and its objectives.
- The more this output contributes to the objectives,
  - the more effective the unit.
- Both objectives and outputs are difficult to quantify,
  - so effectiveness tends to be expressed in subjective, nonanalytical terms.
Efficiency and effectiveness

• Efficiency and effectiveness are not mutually exclusive;
• every responsibility center ought to be both efficient and effective
  – in which case, the organization ought to be meeting its goals in an optimum manner.
Efficient vs. *effective*

- A responsibility center,
  - which carries out its charge with the lowest possible consumption of resources,

- may be efficient,

- but if its output fails to contribute adequately to the attainment of the organizations’ goals,
  - it is not effective

- a responsibility center is efficient
  - *if it does things right*,

- and it is effective
  - *if it does the right things*
The Role of Profit

• A major objective of any profit-oriented organization
  – is to earn a satisfactory profit
• Thus, profit is an important measure of effectiveness.
• since profit is the difference between
  – revenue (a measure of output)
  – and expense (a measure of input),
• it is also a measure of efficiency
• (profit measures both effectiveness and efficiency)
measures

• When such an overall measure exists,
• It is unnecessary
  – to determine the relative importance of effectiveness versus efficiency.
• When such a measure does not exist, however,
  – it is feasible and useful
  – to classify performance measures as relating either to effectiveness or to efficiency
Types of Responsibility
Centers
four types of responsibility centers
classified according to the nature of the monetary inputs and/or outputs
– that are measured for control purposes:
• revenue centers,
• expense centers,
• profit centers,
• investment centers
types of responsibility centers

![Diagram]

Engineered Expense Centers
- Inputs (dollar)
- Optimal relationship can be established
- Work
- Outputs (physical)
- Manufacturing function

Examples

Discretionary Expense Centers
- Inputs (dollar)
- Optimal relationship cannot be established
- Work
- Outputs (physical)
- Research & development function
types of responsibility centers
types of responsibility centers
types of responsibility centers
responsibility centers

• In revenue centers,
  – Output is measured in monetary terms;

• in expense centers,
  – inputs are so measured;

• in profit centers,
  – both revenues (output) and expenses (input) are measured;

• and in investment centers,
  – the relationship between profit and investment is measured

• Each type of responsibility center requires a different planning and control system
Revenue Centers

• output (i.e., revenue) is measured in monetary terms,
• but no formal attempt is made to relate input
  – (i.e., expense or cost)
• to output

• (If expense was matched with revenue, the unit would be a profit center.)
Revenue Centers

• Typically revenue centers are marketing/sales units that
  – do not have authority to set selling prices
  – and are not charged for the cost of the goods they market

• Actual sales or orders booked are measured against budgets or quotas,
  – and the manager is held accountable for the expenses incurred directly within the unit,
  – But the primary measurement is revenue
Expense Centers

• *Expense centers are responsibility centers whose inputs are measured*  
  – *in monetary terms, but whose outputs are not.*

• There are two general types of expense centers:
  – engineered and
  – discretionary.

• These labels relate to two types of cost
two types of cost

• **Engineered costs** are those for which
  – the “right” or “proper” amount can be estimated with reasonable reliability
  – for example, a factory’s costs for direct labor, direct material, components, supplies, and Utilities.

• **Discretionary costs** (also called *managed costs*)
  – are those for which no such engineered estimate is feasible
  – the costs incurred depend on management’s judgment as to the appropriate amount under the circumstances
Engineered Expense Centers - characteristics

- Their input can be measured in monetary terms.
- Their output can be measured in physical terms.
- The optimum dollar amount of input required to produce one unit of output – can be determined.
Engineered expense centers—examples

• are usually found in manufacturing operations.
  – Warehousing, distribution, trucking, and similar units within the marketing organization
  – may also be engineered expense centers,
  – as may certain responsibility centers within administrative and support departments

• accounts receivable, accounts payable, and payroll sections in the controller department;

• personnel records and the cafeteria in the human resources department;

• shareholder records in the corporate secretary department;

• the company motor pool
Engineered expense centers

• Such units perform repetitive tasks for which standard costs can be developed.
• These engineered expense centers are usually located within departments
  – that are discretionary expense centers.
• In an engineered expense center,
  – output multiplied by the standard cost of each unit produced measures
    • what the finished product *should* have cost
Engineered expense centers

• they have other important tasks not measured by cost alone;
  – their supervisors are responsible for the quality of the products and the volume of production as well as for efficiency.

• the type and level of production are prescribed, and specific quality standards are set,
  – so that manufacturing costs are not minimized at the expense of quality
Engineered expense centers

• managers of engineered expense centers may be responsible for activities
  – such as training and employee development that are not related to current production;
• their performance reviews should include an appraisal of
  – how well they carry out these responsibilities
Engineered expense centers

• Even in highly automated production departments,
  – the use of indirect labor and various services can vary with management’s discretion.

• The term *engineered expense center* refers to responsibility centers
  – in which engineered costs predominate,
  – but it does not imply that valid engineered estimates
  – can be made for each and every cost item
Discretionary Expense Centers

- They include administrative and support units
  - (e.g., accounting, legal, industrial relations, public relations, human resources), research and development operations, and most marketing activities

- The output of these centers
  - cannot be measured in monetary terms
Discretionary Expense Centers

• The term *discretionary* does *not* imply
  – that management’s judgment as to optimum cost is capricious or haphazard.

• It reflects management’s decisions regarding certain policies:
  – whether to match or exceed the marketing efforts of competitors;

• the level of service the company should provide to its customers;

• and the appropriate amounts to spend
  – for R&D, financial planning, public relations, and a host of other activities
• One company may have a small **headquarters** staff,  
  – while another company of similar size and in the same industry  
    may have a staff 10 times as large.
• The **senior managers** of each company may each be  
  convinced that their respective decisions on staff size  
  are correct,  
  – but there is **no objective** way to **judge** which (if either) is right;  
  – both decisions may be equally good under the circumstances,
• with the **differences** in **size** reflecting other underlying  
  differences in the two companies.
• **management**’s view as to the proper level of  
  **discretionary costs** is always subject to **change**  
  – especially when new management takes over
discretionary expense center

• In a discretionary expense center,
• the difference
  – between budget and actual expense
• is not a measure of efficiency
• Rather, it is simply the difference between
• the budgeted input and the actual input,
  – and does not incorporate the value of the output
living within the budget

• If actual expenses do not exceed the budget amount,
  – The manager has “lived within the budget,”
  – but since, by definition, the budget
  – does not purport to predict the optimum
    amount of spending,
• **living** within the **budget**
  – does not necessarily indicate **efficient**
    performance.
General Control Characteristics

- Budget Preparation
- Cost Variability
- Type of Financial Control
- Measurement of Performance
Budget Preparation

- Management makes **budgetary** decisions
  - for **discretionary** expense centers that differ from those for engineered expense centers.
- It decides whether the proposed operating budget represents the unit cost of performing its task **efficiently**
- Its **volume** is not a major **concern**;
- This is largely **determined** by the **actions** of other **responsibility** centers
  - for instance, the marketing department’s ability to generate sales
Budget Preparation

- The work done by discretionary expense centers falls into two *general categories*:
  - continuing and special

- **Continuing** work
  - is done *consistently* from year to year,
  - such as the *preparation* of financial *statements* by the controller’s office

- **Special** work
  - is a “one-shot” project
  - for example, developing and installing a profit-budgeting system in a newly acquired division
incremental budgeting and zero-base review

• A **technique** often used in preparing a discretionary expense center’s budget is **management by objectives**, 
  – a formal process in which a **budgetee** proposes to

• **accomplish specific jobs and suggests the measurement** to be used in **performance evaluation**.

• The **planning function** for discretionary expense centers is usually carried out in one of two ways:
  – **incremental** budgeting or **zero-base** review
Incremental Budgeting

- In this model, the discretionary expense center’s current level of expenses is taken
  - as a starting point
- This amount is adjusted for inflation,
- anticipated changes in the workload of continuing job, special job,
- If the data are readily available
- the cost of comparable jobs in similar units
drawbacks

• 1) the **discretionary expense** center’s **current level** of expenditure is **accepted** and **not reexamined** during the budget preparation process.

• 2) **managers** of these centers typically want to **increase the level of services**, 
  – and thus tend to request additional resources, 
  – Which are usually provided

• **most budgeting in discretionary expense centers is incremental**
Zero-Base Review

• An alternative budgeting approach is to make a thorough analysis of each discretionary expense center on a rolling schedule,
  – so that all are reviewed at least once every five years or so.
• This is often called a zero-base review
Zero-Base Review

- In contrast with incremental budgeting, this intensive review attempts to ascertain, de novo,
  - that is, from scratch, the resources actually required to carry out each activity within the expense center

- This analysis establishes another new base,
  - at which point the annual budget review simply attempts to keep costs reasonably in line with this base until the next review takes place, five years down the line
basic questions

• Certain **basic questions** are often raised in the course of this analysis:

• (1) **Should** the **function** under review be performed at all? Does it **add value** from the standpoint of end use customers?

• (2) **What** should the **quality** level be? Are we doing too much?

• (3) **Should** the function be **performed in this way**?

• (4) **How much** should it **cost**?
Information sources

• **Information** from other sources,
• including **similar units** within the company,
  – trade **associations** and
  – other **outside organizations**,  
  – and **companies** in other **industries** with **superior performance** (i.e., via **benchmarking**),
• is often useful for **comparison** purposes.
• Such comparisons may raise the interesting question:
  – If Company X can get the job done for Y dollars, why can’t we?
Zero-base reviews

- Zero-base reviews are **time-consuming**, and they are **likely** to be **traumatic** for the **managers** whose operations are being reviewed
  - (this is one reason for scheduling such reviews so infrequently).
- Also, **managers will not** only do their best to justify their current level of **spending**, but may also **attempt to thwart** the entire effort, regarding the zero-base review
  - as something to be put off indefinitely in favor of “more pressing business”
management by objectives

- A **technique** often used in **preparing a discretionary expense** center’s budget is **management by objectives**, - a **formal process** - *In which a budgetee proposes to* - accomplish specific jobs and suggests the measurement to be used in performance evaluation.

- The planning function for discretionary expense centers is usually carried out in one of two ways: - incremental budgeting or - zero-base review
Zero-base reviews

• In the later 1980s and the 1990s,
• many companies conducted zero-base reviews,
  – usually as a reaction to a downturn in profitability.
• These efforts were often called
  – downsizing, or, euphemistically, rightsizing or restructuring, or process reengineering
Cost Variability

• Unlike costs in engineered expense centers,
• which are strongly affected by shortrun volume changes,
• costs in discretionary expense centers are comparatively insulated from such short-term fluctuations.
Cost Variability

• This **difference** stems from the fact that in preparing the budgets for **discretionary** expense **centers**, 

• **Management** tends to **approve** changes that correspond to **anticipated** changes in 

• **sales volume**  
  – for example, allowing for additional personnel when volume is expected to increase,  
  – and for layoffs or attrition when volume is expected to decrease.
Personnel costs

• **Personnel** and personnel-related costs are by far
• the **largest expense** items in most discretionary expense centers;
• thus, the annual budgets for these centers
• therefore tend to be
• a constant percentage of budgeted sales volume
Cost Variability

• once **managers** of discretionary expense centers
  – **hire additional personnel** or plan for attrition in accordance with the approved budget,
• it is **uneconomical** for them to **adjust** the work force for short-run fluctuations;
• hiring and training personnel for short-run needs
• is expensive,
• and temporary layoffs hurt morale.
Type of Financial Control

• Financial control
  – in a discretionary expense center is quite different from
  – that in an engineered expense center.

• In the latter, the objective is to become cost competitive
  – by setting a standard and measuring actual costs against this standard.
Financial Control

- the main **purpose** of a **discretionary** expense budget is to **control costs**
  - by allowing the **manager** to participate **in the planning**,  
  - **sharing** in the **discussion** of what **tasks** should be **undertaken**,  
  - and what **level** of **effort** is **appropriate** for each.
- Thus, in a discretionary expense center, **financial control**
  - is primarily **exercised** at the **planning stage** **before** the costs are incurred
Measurement of Performance

• The primary job of a discretionary expense center’s manager
  – is to obtain the desired output.
• Spending an amount that is “on budget” to do this is considered satisfactory;
  – spending more than that is cause for concern;
• and spending less may indicate that the planned work is not being done
financial performance report

• In discretionary centers,
  – as opposed to engineered expense centers,
• the financial performance report
• is not a means of evaluating
  – the efficiency of the manager.
responsibility centers

• If these two types of responsibility centers are not carefully distinguished,
• management may erroneously treat
• a discretionary expense center’s performance
• report
  – as an indication of the unit’s efficiency,
  – thus motivating those making spending decisions
• to expend less than the budgeted amount,
  – which in turn will lower output.
• For this reason, it is unwise to reward executives
  – Who spend less than the budgeted amount.
Control over spending

• **Control** over spending can be **exercised**
  – by **requiring** the superior’s approval **before** the budget is overrun.

• Sometimes, a certain **percentage** of overrun
  – (say, 5 percent)

• is **permitted without** additional **approval**
control over discretionary expense centers

• the preceding paragraphs
  – are solely related to financial control.

• Total control over discretionary expense centers
  – is achieved primarily through nonfinancial performance measures.

• For example, the best indication of the quality of service

• for some discretionary expense centers
  – may be the opinion of their users
Administrative and Support Centers
Administrative centers

- **Administrative centers** include senior corporate management and **business unit management**, along with the managers of **supporting** staff units.
- **Support centers** are units that provide **services** to other **responsibility centers**.
Control Problems

• The **control** of administrative expense is especially **difficult** because of

• (1) the problems **inherent** in measuring output and

• (2) the **frequent** lack of **congruence** between

  – the **goals** of **departmental staff** and

  – of the **company** as a whole
Difficulty in Measuring Output

• Some staff activities,
  – such as payroll accounting,
• are so routinized
• that their units are,
  – in fact, engineered expense centers.
• In other activities, however, the principal output is advice and service
  – functions that are virtually impossible to quantify, much less evaluate
Difficulty in Measuring Output

• Since output cannot be measured,
• it is not possible to set cost standards against
  – which to measure financial performance.
• Thus, a budget variance
• cannot be interpreted
• as representing either efficient or inefficient performance
Difficulty in Measuring Output

- If the **finance staff** were to be given an allowance
- to “**develop an activity-based management system,**”
  - for example, a comparison of actual cost to budgeted cost would not indicate
  - whether or not the assignment
- had been carried out **effectively,**
  - regardless of the expense involved
Lack of Goal Congruence

- managers of administrative staff offices strive for functional excellence.
- Superficially, this desire would seem to be congruent with company goals; in fact, much depends on how one defines excellence.
- Although a staff office may want to develop the “ideal” system, program, or function, the ideal may be too costly relative to the additional profits that perfection may generate.
Lack of Goal Congruence

• The “perfect” legal staff,
  – for example, will not approve any contract that contains even
• the slightest flaw;
• but the cost of maintaining a staff large enough to guarantee this level of assurance
• may outweigh the potential loss from minor flaws.
• At worst, a striving for “excellence” can lead to “empire building” or to “safeguarding one’s position”
  – without regard to the welfare of the company
Lack of Goal Congruence

• The severity of these two problems
  – the difficulty of measuring output and
  – the lack of goal congruence

• is directly related to the size and prosperity of the company.

• In small and medium-sized businesses,
  – senior management is in close personal contact with staff units

• and can determine from personal observation
  – what they are doing and whether a unit is worth its cost
Lack of Goal Congruence

• And in businesses with low earnings,
  – regardless of size,
• discretionary expenses are often kept under tight control.
• In a large business
  – senior management cannot possibly know about,
  – much less evaluate, all staff activities;
• and if that company is also a profitable one,
  – there is temptation to approve staff requests
  – for constantly increasing budgets
budget for an administrative or support center

• It usually consists of a **list of expense items**, with the proposed budget being compared with the current year’s actual expenses.

• Some **companies** request a more **elaborate** presentation,

• which may **include** some or all of the following **components**:
budget for an administrative or support center

• A section covering the basic costs of the center
  – including the costs of “being in business”
  – plus the costs of all intrinsically necessary activities for which no general management decisions are required.

• A section covering the discretionary activities of the center,
  – including a description of the objectives and the estimated costs of each.

• A section fully explaining all proposed increases in the budget other than those related to inflation.
Research and Development Centers
Control Problems

- The **control** of research and development centers presents
- its own characteristic **difficulties**, in particular,
- **difficulty** in relating results to **inputs** and **lack** of goal **congruence**
Difficulty in Relating Results to Inputs

• The results of research and development activities are difficult to measure quantitatively.
• In contrast to administrative activities, R&D usually has at least a semitangible output in the form of
  – patents, new products, or new processes;
• but the relationship of output to input is difficult to appraise on an annual basis
  – because the completed “product” of an R&D group may involve several years of effort.
• inputs as stated in an annual budget may be unrelated to outputs
Difficulty in Relating Results to Inputs

• Furthermore, even when such a relationship can be established,
• it may not be possible to reliably estimate the value of the output.
• And even when such an evaluation can be made,
  – the technical nature of the R&D function may defeat management’s attempt to measure efficiency.
• A brilliant effort may come up against an insuperable obstacle,
  – whereas a mediocre effort may, by luck, result in a bonanza.
Lack of Goal Congruence

• The goal congruence problem in R&D centers is similar to that in administrative centers.

• The research manager typically wants to build the best research organization money can buy, even though that may be more expensive than the company can afford.

• A further problem is that research people often do not have sufficient knowledge of (or interest in) the business.

• to determine the optimum direction of the research efforts.
The R&D Continuum

• The activities conducted by R&D organizations lie along a continuum, with
  – basic research at one extreme and product testing at the other.

• Basic research has two characteristics:
  – (1) it is unplanned, with management at best specifying the general area to be explored;
  – (2) there is often a significant time lapse between the initiation of research and the introduction of a successful new product.
The R&D Continuum

• Because financial control systems have little value in managing basic research activities,
  – alternative procedures are often employed.

• In some companies,
  – basic research is included as a lump sum in the research program and its budget.

• In others,
  – no specific allowance is made for basic research as such,
  – but there is an understanding that scientists and engineers can devote part of their time (perhaps 15 percent, or one day a week) to exploring in whatever direction they find most interesting,
  – subject only to the informal agreement of their supervisor
The R&D Continuum

• For projects involving product testing,
  – it is possible to estimate the time and financial requirements
  – perhaps not as precisely as for production activities,
  – but with sufficient accuracy to permit a reasonably valid comparison
    of actual and budget amounts.

• As a project moves along the continuum
  – from basic research, to applied research, to development, to
    production engineering, to testing—the amount spent per year tends
    to increase substantially.

• Thus, if it appears that a project will ultimately turn out to be
  unprofitable
  – (as is the case for 90 percent of projects, by some estimates), it should
    be terminated as soon as possible.

• It is difficult to make such decisions in the early stages,
  – since project sponsors usually describe the work-in-progress in the
    most favorable light

• In some cases failure is not discernible until after the product
  reaches the market.
R&D Program

• There is no scientific way of determining the optimum size of an R&D budget.

• Many companies simply use a percentage of average revenues as a base
  – (preferring an average to a percentage of specific revenues in a given year because the size of an R&D operation ought not to be affected by short-term revenue swings)
R&D Program

• The specific percentage applied is determined in part by a comparison with competitors’ R&D expenditures and in part by the company’s own spending history.

• Depending on circumstances, other factors may also come into play:
  – For example, senior management may authorize a large and rapid increase in the budget
  – if it appears that there has been (or is about to be) a significant breakthrough
The content of R&D program

• The **R&D program** consists of a list of programs plus a blanket allowance for **unplanned** work
  – it is usually reviewed **annually** by **senior management**.
  – This review is often **conducted** by a **research committee** consisting of the **CEO**, the **research director**, and the production and marketing managers
  – (the latter are included because they will use the output of those research projects that turn out to be successful).
The committee

• This committee makes broad decisions as to
  – which projects to undertake,
  – which to expand,
  – which to cut back on,
  – which to discontinue.

• These decisions, of course, are highly subjective,
  – but they are within the established policy limits on total research spending.

• the research program is determined not by calculating the total amount of approved projects,
  – but rather by dividing the “research pie” into what seem
  – to be the most worthwhile slices
Annual Budgets

• If a company has decided on a long-range R&D program and has implemented this program with a system of project approval,

• the preparation of the annual R&D budget is
  – a fairly simple matter,
  – involving mainly the “calendarization” of the expected expenses for the budget period
Annual Budgets

• If the budget is in line with the strategic plan
  – (as it should be),
• approval is routine
  – it primarily serves to assist in cash and personnel planning.
• Preparation of the budget allows management
• to take another look at the R&D program with this question in mind:
  – “In view of what we now know, is this the best way to use our resources next year?”
Annual Budgets

- The **annual budget process** also **ensures** that actual costs
- will **not exceed** budgeted amounts
  - without management’s knowledge.

- **Significant variances** from the budget
  - should be approved by management before they are incurred.
Measurement of Performance

• At regular *intervals*,
  – usually monthly or quarterly,
• most companies *compare* actual *expenses* with *budgeted expenses*
  – for all *responsibility centers* and *ongoing projects*.
• These *comparisons* are *summarized* for *managers*
• at *progressively higher levels*
  – to assist the managers of responsibility centers in planning their expenses and
  – to assure their superiors
    • that those expenses are remaining at approved levels.
Measurement of Performance

• In many companies,
• management receives **two types** of financial reports on R&D activities.
  – The **first** type **compares** the latest **forecast** of total cost with the **approved** amount for each active project.
  – It is **prepared periodically** for the executives who control research spending,
  – to help them **determine** whether **changes** should be made in the list of **approved projects**
Measurement of Performance

• The **second** type of **financial** report **consists of**
  – a comparison between **budgeted expenses** and **actual expenses** in each **responsibility center**.
  – Its main **purpose** is to **help research executives** anticipate expenses and make sure that expense commitments are being met.

• Neither type of financial report informs management as to the effectiveness of the research effort
Marketing Centers
Marketing Centers

• In many companies,
• two very different types of activities are grouped
• Under the heading of marketing,
  – with different Controls being appropriate for each.
Marketing activities

• One group of activities relates to the filling of orders.
  – *filling* or *logistics* activities and, by definition,
  – take place *after* an order has been received.

• The other group of activities relates to efforts to obtain orders, and, obviously,
  – take place *before* an order has been received.
  – These are the *true marketing* activities,
  – and are sometimes labeled as such;
  – they may also be called *order-getting* activities.
Logistics Activities

• **Logistics activities** are those involved in
  – moving goods from the company to its customers and collecting the amounts due from customers in return.

• These **activities** include
  – transportation to **distribution** centers,
  – warehousing,
  – **Shipping** and **delivery**,
  – billing and the related credit function,
  – the **collection of accounts receivable**.

• The **responsibility** centers that **perform** these functions are fundamentally
  – similar to the expense centers in **manufacturing** plants
Logistics Activities

• Many are **engineered** expense centers
  – that can be **controlled** through imposing **standard** costs and adjusting budgets
  – to **reflect** these costs at **different** levels of **volume**.

• In most **companies**, the “**paperwork**” involved in filling orders and collecting receivables
  – is now **accomplished quickly** and at **low cost** by using the Internet
Marketing Activities

• In many companies, two very different types of activities are grouped under the heading of marketing,
  – with different Controls being appropriate for each.

• One group of activities relates to the filling of orders.
  – these are referred to as order filling or logistics activities and,
  – by definition, take place after an order has been received.
Marketing Activities

• The other group of activities relates to efforts to obtain orders, and,
• take place before an order has been received
  – These are the true marketing activities, and are sometimes labeled as such;
  – they may also be called order-getting activities
Logistics Activities

• **Logistics** activities are those **involved**
  – in **moving goods** from the company to its customers and
  – **collecting** the **amounts** due from customers in **return**.

• These activities **include**
  – **transportation** to **distribution** centers, **warehousing**, shipping and delivery, **billing**
  – the related credit function,
  – the collection of **accounts** receivable.
Logistics Activities

• The responsibility centers that perform these functions
  – are fundamentally similar to the expense centers in manufacturing plants.
• Many are engineered expense centers
  – that can be controlled through imposing standard costs
  – and adjusting budgets to reflect these costs at different levels of volume.
• In most companies, the “paperwork” involved
  – in filling orders and collecting receivables
• is now accomplished quickly and at low cost by using the Internet
Marketing Activities

• Marketing activities are those undertaken to obtain orders for company products.

• These **activities** include
  – **test** marketing;
  – the **establishment, training,** and
  – supervision of the **sales** force;
  – **advertising**; and sales **promotion**
    • all of which have characteristics that present management control problems.
Marketing Activities

- While it is possible to measure a marketing organization’s output,
- Evaluating the effectiveness of the marketing effort is much more difficult.
- This is because changes in factors beyond the marketing department’s control
  - (e.g., economic conditions or the actions of competitors)
- may invalidate the assumptions on which the sales budgets were based.
Marketing Activities

• In any case, meeting the budgetary commitment for marketing expenses is not a major criterion in the evaluation process, because the impact of sales volume on profits tends to overshadow cost performance.

• If a marketing group sells twice as much as its quota,
  – it is unlikely that management will be concerned
  – that it exceeded its budgeted cost by 10 percent to bring in those sales.

• The sales target, not the expense target, is the critical factor.
Marketing Activities

• The **control** techniques **applicable** to logistics activities are generally not **applicable** to **order-getting** activities.
  – Failure to appreciate this fact can lead to incorrect decisions.

• **For example,**
  – there is often a reasonably good correlation
  – between sales volume and
  – the level of sales promotion and advertising expense.
Marketing Activities

• This could be taken to mean that sales expenses vary as a result of sales volume, but such a conclusion would be erroneous.

• Flexible budgets that adjust to changes in sales volume cannot be used to control selling expenses incurred before the sale took place.
Marketing Activities

• Neither should advertising or sales promotion expense budgets be adjusted to accommodate short-run changes in sales volume.

• Many companies budget marketing expenses as a percentage of budgeted sales,
  – but they do so not because sales volume causes marketing expense,
  – but rather on the belief that the higher the sales volume,
  – the more the company can afford to spend on advertising
Summary

• there are three types of activities within a marketing organization,
• and, consequently, three types of activity measures.
• First, there is the order-filling or logistics activity,
  – many of whose costs are engineered expenses.
• Second, there is the generation of revenue,
  – which is usually evaluated by comparing actual revenue and physical quantities sold with budgeted revenue and budgeted units, respectively.
• Third, there are order-getting costs,
  – which are discretionary because no one knows what the optimum amounts should be.
  – the measurement of efficiency and effectiveness for these costs is highly subjective.