

ACCOUNTING 2

ACCOUNTING FUNCTIONS

- A. Helps an organization to achieve its goals and objectives by gathering, organizing, and communicating information about its activities
- - 1. Internal managers: Short-term planning, long range planning, controlling routine operations, and nonroutine decisions
 - 2. External parties: Making decisions about the company based on information presented in financial statements governed by GAAP
- C. An accounting system uses 3 types of activities
 - 1. Score-keeping to accumulate and classify data
 - 2. Attention-directing to focus on problems and opportunities
 - 3. Problem-solving to recommend the best course of action
- D. Themes that guide the design of all accounting systems
 - 1. Cost/benefit criteria
 - 2. Behavioral implications; effects on the manager's decision making
- E. Accounting's position in the organization
 - 1. Line authority: Downward over subordinates
 - 2. Staff authority: Downward, laterally, or upward
 - 3. The controller: Top accounting officer in an organization, measures and reports on operating performance
- F. Accountants are expected to adhere to standards of

COST BEHAVIOR

COST-VOLUME RELATIONSHIPS

- A. Cost drivers: Activities that cause costs to be incurred
- B. Variable costs vs. fixed costs
- 1. VC change in direct proportion to the cost driver
- 2. FC do not change immediately with the cost driver
- C. Cost-volume-profit analysis
 - 1. Break-even point: Level of sales at which revenues = expenses
 - 2. Contribution (CM) margin/unit = sales price/unit VC/unit

 - 3. Sales VC FC = net income 4. Break even in units = FC/CM per unit
 - 5. Break even in \$ = FC/CM ratio
 - 6. Target profit can be added to FC
- Relevant range: Limit of cost-driver activity where FC/VC assumption is valid

VARIATIONS OF COST BEHAVIOR

- A. Cost drivers and cost behavior
 - 1. Cost behavior is assumed linear over some relevant range of activities or cost drivers.
 - 2. Cost behaviors that combine characteristics of both fixed and variable cost behavior
 - a. Step costs: Either fixed or variable, changed abruptly at interval of activity because the resources and their costs come in divisible chunks
 - b. Mixed costs: Contain elements of FC & VC
- B. Management's influence on cost functions
 - Through decisions about product or service attributes, capacity, technology, and policies to create incentives to control costs
- C. Measure cost behavior as a function of appropriate cost drivers
 - 1. Total cost=FC+(VC x cost driver)
 - 2. Apply activity analysis in choosing a cost driver
 - 3. Plausibility and reliability when choosing a cost function for accuracy and usefulness
 - D. Methods of measuring cost functions (Y=F+VX)
 - 1. Cost = Fixed cost + (Variable cost x # of Units)
 - 2. Engineering analysis: what costs should be
 - 3. Accounting analysis:
 - a. Volume related cost driver versus what cost could have been
 - b. Classify each account as a VC or FC
 - 4. High-low, visual-fit, and least-squares methods: separate F & V past data to predict costs

RELEVANT INFORMATION AND DECISION MAKING

- A. Criteria for relevant information
 - 1. Predicted future cost: Differ among alternatives
 - 2. Past data: Irrelevant
 - 3. Cost or revenue that remains the same regardless of the alternative: Irrelevant
- B. Special Sales order
 - 1. Should accept when additional revenues > additional costs
 - 2. Fixed costs normally unaffected
- C. Deletion or addition of products or departments
 - 1. Avoidable costs: Will not continue
 - 2. Unavoidable costs: Continue
- D. Optimal use of limited resources
 - 1. Emphasize product with largest total profit contribution per unit of the limiting factor
 - 2. # of units/limiting factor x (CM)/unit = total CM/unit of limiting factor (CM = Contribution Margin)
- E. Role of costs in pricing decisions
 - 1. Marginal cost: Additional cost for one more unit produced
 - 2. Marginal revenue: Additional revenue from one more unit sold
 - 3. Price elasticity: Effect of price changes on sales volume
- F. Influences on pricing in practice
 - 1. Legal requirements:
 - a. Predatory pricing
 - b. Discriminatory pricing
 - 2. Competition
 - 3 Costs
 - 4. Customer demand
 - 5. Target costing: Design a product that can be produced at a low enough cost to provide an adequate profit margin
- G. Opportunity cost
 - 1. Max profit forgone by choosing an alternative
 - 2. Economic in nature
- H. Outlay cost
 - 1. Requires cash outlay
 - 2. Accounting in nature
- I. Differential = incremental cost
 - 1. Difference in total cost between alternatives
 - 2. Used in differential analysis
- J. Make-or-buy decisions
 - 1. Identify quantitative and qualitative factors
 - 2. Focus on relevant costs
- K. Joint product costs: Occur when two or more products have relatively significant sales values
 - 1. Not separately identifiable until split-off point
 - 2. Identify separable costs beyond split-off point
 - 3. Identify joint costs prior to split-off point
 - 4. Decide whether to sell or process further
 - a. Differential analysis
 - b. Opportunity cost analysis
 - c. Joint costs are irrelevant

INTRODUCTION TO COST **SYSTEMS**

A. Classification of costs

- 1. Cost accumulation and cost objectives
- a. A cost is a sacrifice or giving up of resources for a purpose.
- b. A cost objective is something that managers want to know the cost of
- 2. Direct and indirect costs
 - a. Direct costs can be identified specifically and exclusively with a given cost objective.
 - b. Indirect costs cannot be identified with a given cost objective.
- 3. Manufacturing costs
- a. Direct-material costs (DM): Costs of all materials that are physically identified as a part of the manufactured goods
- b. Direct-labor costs (DL): The wages of all the labor that can be traced to manufactured goods

- c. Factory-overhead costs (F/O): All costs other than DM or DL
- 4. Prime costs = DM+DL
- 5. Conversion costs = DL+F/O
- B. Types of accounting systems
 - 1. Activity-based cost accounting
 - a. Accumulate overhead costs for each activity
 - b. Assign the costs to cost objects
 - 2. Cost management system
 - a. Measure the resources used
 - b. Assess the effects of costs of changes
 - 3. Just-in-time system

Purchase and produce when needed in the production

- C. Cost accounting for I/S and B/S
 - 1. Product cost: Identified with goods purchased or produced for resale and become expenses (CGS) when inventory is sold
 - 2. Period cost: Expensed during the current period without inventory stage
- D. Two approaches to costs on I/S
 - 1. Absorption costing: All V and F manufacturing costs are treated as product cost
 - 2. Contribution approach: Only V manufacturing costs are treated as product cost
 - a. Sales-VC=Contribution Margin b. Contribution Margin-FC = operating income

BUDGETING

MASTER BUDGET: OVERALL PLAN

- A. Budgeting over time
 - 1. Strategic plan: Overall goals and objectives
 - 2. Long-range planning: For 5-10 yrs
 - 3. Capital budget: Planned expenditures for facilities,
 - equipment, etc. 4. Master budget: Summarize all subunits

 - a. Operating budget: Focus on I/S and its schedules b. Financial budget: Effects of operating and capital budgets on cash
- B. Advantages of budgets

 - 1. A planning tool
 - 2. Maintaining control by evaluating actual to budget
- 3. Enhanced communication and coordination C. Preparation of master budget

 - 1. Operating budget
 - a. Prepare sales budget b. Estimate cash collections
 - c. Prepare purchases budget
 - d. Estimate disbursements for purchases
 - e. Prepare operating expense budget
 - f. Estimate disbursements for operations
 - 2. Financial budget a. Prepare detailed cash budget
 - b. Prepare budgeted B/S
- D. Difficulties All budgets rely on sales budget 1. Past patterns used
 - 2. Estimates 3. Volatile economic environment

FLEXIBLE BUDGETS AND STANDARDS FOR CONTROL

- A. Static budget = master budget
 - 1. Performance report: Actual results vs. original plan
 - 2. Master budget variances
 - a. Favorable or unfavorable
- b. Not useful for management by exception B. Flexible budget = variable budget
 - 1. Adjust for changes in cost-drivers 2. Prepared for a range of activity
 - 3. Reflect FC and VC behavior
 - 4. Flexible budget variances: Flexible budget vs. actual results
 - 5. Activity level variances: Flexible budget vs. master budget

C. Isolation of variances and their causes

- 1. Effectiveness: Degree to which a goal or target is met, measured by sales-activity variance
- 2. Efficiency: Inputs used in relation to outputs, measured by flexible budget variance
- 3. Expected cost: Most likely to be attained
- 4. Standard cost: Should be attained; Budget for one unit

D. Flexible budget variances

1. Variances from material and labor standards

- a. Price (rate) variance: Difference between actual input price and standard price
- b. Usage (quantity or efficiency) variance: Difference between quantity of input used and quantity allowed for actual output
- 2. Provide feedback

3. Overhead (OH) variances

- a. Variable OH efficiency variance
- b. Variable OH spending variance

MANAGEMENT CONTROL SYSTEMS

A. MCS: an integration of management accounting tools

- 1. Organizational goals: #1 in designing MCS (broad)
- 2. Organizational sub-goals: Means of achieving organization's overall goals (mid-range)
- 3. Organizational objectives: Day-to-day guidance (specific) 4. Balance of goals, sub-goals, and objectives:
- Overemphasis on short term to the detriment of long range threatens achievement of organization's basic goals

B. Designing a MCS

- 1. Working within constraints: MCS must fit organization's structure (ie: whether it is by function or division)
- 2. Identification of responsibility centers
 - a. Cost center: Where costs are accumulated
 - b. Profit center: Measures revenue less costs
 - c. Investment center: Measures net income to invested capital
- 3. Weighing costs and benefits: Maximum benefits at minimum costs
- 4. Motivation of employees
- a. Goal congruence: Individuals and groups aim at same goals
- b. Managerial effort: Exertion toward goal or objective
- 5. Design of internal controls: Prevent, detect errors & irregularities and promote operational efficiency
 - a. Accounting controls: Separation of duties, etc.
- b. Administrative controls: Budgets for planning, controlling, and evaluating
- 6. Development of measures of performance: For both financial & non-financial performance measures

C. Control and measurement of financial performance

- 1. Uncontrollable costs: Cannot be affected by management within a given time span
- 2. Controllable costs: Influenced by managements' decisions
- 3. Contribution margin
- 4. Contribution by segment-controllable by responsibility center managers
- 5. Unallocated costs

D. Control and measurement of non-financial performance

- 1. Quality control
- a. Prevention: Costs to prevent defects/substandard service
- b. Appraisal: Costs to identify defects/substandard service
- c. Internal failure: Costs to scrap or rework
- d. External failure: Customer dissatisfaction
- 2. Control of time cycle
- 3. Control of productivity

MANAGEMENT CONTROL IN DECENTRALIZED **ORGANIZATIONS**

A. Centralization vs. Decentralization

- Cost/benefit criteria
- 2. Profit centers and decentralization

B. Transfer pricing 1. At cost

2. Market based

- 3. VC based
- 4. Negotiated
- 5. Use of incentives
- 6. Need for many transfer prices
- 7. Multinational transfer pricing
- C. Performance measures and management controls
 - 1. Motivation > performance > rewards
 - 2. Agency theory > performance > rewards > risk

D. Measures of profitability

- 1. Return on investment (ROI) = income / investment
- 2. Residual income = NI imputed interest

E. Invested capital can be defined as:

- 1. Total assets
- 2. Total assets employed
- 3. Total assets current liabilities
- 4. Stockholders' equity

Keys to successful management control systems

- 1. Focus on controllability
- 2. Management by objectives

CAPITAL BUDGETING

ANALYZING LONG-RANGE **DECISIONS**

A. Discounted cash flow models

- 1. Net present value (NPV) method
 - a. Total project approach: Choose largest NPV
- b. Differential approach: Choose if NPV is positive
- 2. Internal rate of return (IRR) method- choose if IRR > desired rate of return
- 3. Risk assessment and sensitivity analysis
- 4. Complications: Income taxes, inflation, mutually exclusive projects, and unequal lives

B. Pay-back method: P = I/O

- 1. Pay-back time = Initial investment / Annual cash flow
- 2. Does not measure profitability
- 3. Ignores time value of money

C. Accounting rate-of-return (ARR) method: ARR = (O - D)/I

- 1. (Increase avg. operating inc. depr.) / initial investment
- 2. Ignores time value of money

D. Performance evaluation

- 1. Conflict: Evaluations based on accounting measures can deter from making major long-term decisions with large initial investments
- 2. Reconciliations of conflict
 - a. Post audit: Monitor and evaluate projects
 - b. Base management evaluations on different priorities

TAXES AND INFLATION

A. Marginal income tax rate

Tax rate paid on additional amts of pretax income

Recovery period

Number of periods assets are depreciated for tax purposes

Tax shields; deductions protect that amount of income from taxation

D. Accelerated depreciation

- 1. Writes off assets quicker than straight-line method
- 2. Tax avoidance (minimizing and delaying taxes)
- 3. Double declining balance depreciation: (100%/# of years asset is to be depreciated) x 2

E. Depreciation and equipment replacement

- 1. Initial investment
- a. Cost of old equipment: Effect on tax cash flows
- b. Cost of new equipment is relevant
- 2. Do not double count: Equipment investment is a onetime outlay not to be double-counted as an outlay in the form of depreciation.
- 3. Relation to income tax cash flow: Income tax cash effect relevant (Not the book value or depreciation)

F. Gains or losses on disposal

- 1. Losses produce tax savings and gains produce tax expenditures
- 2. Gains are still more desirable than losses

G. Capital budgeting and inflation

- 1. Nominal rate: Quoted market interest rate a. Includes an element of inflation b. Use for minimum desired rate of return
- 2. Depreciation Deductions: No allowance for inflationary effects

H. After-tax impact of operating cash inflows Inflow x (1-tax rate)

COST ALLOCATION

INTRODUCTION

A. Assignment of each cost to the cost objective

B. Purposes

- 1. Prediction of economic effects of decisions

- 2. Reallocation of costs from one unit to another

- 1. Allocate production related costs to their operation, production or revenue producing department
- 2. Select one or more cost drivers in each production department
- 3. Allocate the total cost accumulated in Step 1 to products or services using cost drivers specified in Step 2.

ACTIVITY BASED COSTING

Assignment of cost to products or services in proportion to the benefits received from that cost A. Assigns costs to activities B. Cost drivers

OVERHEAD APPLICATION: VARIABLE AND ABSORPTION COSTING

A. Variable vs. absorption costing

- 1. Accounting for fixed manufacturing overhead
- a. Variable costing method: FFO is excluded
- b. Absorption costing method: FFO is included
- 2. Variable method
- a. Apply all variable manufacturing costs to goods produced
- b. Fixed FO is expensed as incurred
- c. I/S separates costs into categories of fixed and variable

3. Absorption method

- a. Apply all variable manufacturing costs plus part of fixed FO to each product
- b. I/S separates costs into categories of manufacturing and non-manufacturing
- c. Fixed overhead rate = budgeted fixed
- overhead/expected cost driver activity d. Production-volume variance: Actual production

deviates from the expected volume used B. Fixed overhead and absorption costs of product

- 1. Variable and fixed unit costs 2. Production-volume variance = applied fixed
- overhead-budgeted fixed overhead a. Actual production volume does not coincide with
- expected volume 3. Fixed overhead rate depends on expected activity
- level chosen 4. Actual costing: Actual materials, actual labor, and
- actual variable and fixed overhead 5. Normal costing: Actual materials, actual labors, and
- budgeted rates for FO 6. Standard costing: Budgeted rates

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- 2. To obtain desired motivation
- 3. Income and asset measurement
- 4. To justify cost or obtain reimbursement
- 1. Allocation of costs to appropriate units
- 3. Allocation of a particular unit to products or services

D. Allocation of costs to final products or services