Cost Management

Chapter 6

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Cost

➷ The term "cost" is issued in many contexts and it is useful to pay attention to the context to understand the intended meaning.

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Cost Examples

Here are some examples:

1) Cost of a dishwasher is $5,000 - means purchase price.

2) Labor cost for the period is $10,000 - means expense, payment was made in exchange for labor services rendered.

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Cost Examples

3) Cost of damages to the hotel from hurricane is approximately $10,000 - refers to loss of assets.

Generally, "cost" will be used in this topic to mean "expenses".

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Definition of Cost

A general definition that covers all three examples above is:

Cost is a measure of something that has been given up (or will be given up) in the process of getting things done to ultimately increase revenues.

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Managers Use of Cost

Managers often may use the concept of cost to:

- predict or accomplish an objective in the least expensive manner,
- compare cost to revenue to predict or achieve the highest profit or smallest loss,

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How are Costs Used?

Costs are often predicted and analyzed before decisions are made and implemented. Then these predicted costs are used to evaluate the effectiveness of management decisions.

Importance of cost management to hospitality enterprises?

Most hospitality operations earn a net profit around 10% or less, meaning that 90% of revenues generated are used to cover costs. Hence cost management or cost controls is an important responsibility of management.

Operating Costs

Operating costs can be defined/described in two ways:

1) by the behavior of these costs in relation to changes in sales volume,
2) whether or not they directly affect an operated department or income-generating department.

Defining Costs in Terms of Behavior

FIXED COSTS - costs that do not change in the short-run (< 1 year) regardless of changes in sales levels eg. management salaries, property taxes, interest expense, insurance expense, depreciation expense etc.
These costs are sometimes referred to as capacity or discretionary costs.

Defining Costs in Terms of Behavior (cont.)

Capacity fixed costs – because they enable the business to provide products and services eg. depreciation, interest, property taxes, and salaries.

Defining Costs in Terms of Behavior (cont.)

Discretionary fixed costs – describe expenses that a GM can avoid in the short-run without affecting current operations eg. training expense, advertising expense, management seminars – usually eliminate to meet budget projections.

Defining Costs in Terms of Behavior (cont.)

** Absolute size of fixed costs do not change in the short-run but fixed cost per unit changes with changes in volume. In the long run all fixed costs can be variable.

Defining Costs in Terms of Behavior (cont.)

VARIABLE COSTS - costs that change with the volume of sales. These costs also change proportionally (although in reality the proportion may not always be exact but they approximate exact proportions), eg. food cost, beverage cost, gst amenities expense, wage expense etc.

Defining Costs in Terms of Behavior (cont.)

** Absolute size changes with sales level but variable cost per unit remains constant across sales levels.

Defining Costs in Terms of Behavior (cont.)

MIXED COSTS - costs that are partly fixed and partly variable. Also termed semi-variable costs, semi-fixed costs, or simply semi-costs. These costs vary with the level of sales but not in direct proportion to it. Their fixed elements are determined without regard to sales levels, while the variable elements are expected to vary proportionally with sales levels.

Examples of Mixed Costs

Telephone expense:

Fixed Component	Varaible Component
cost of the system, cost of the equipment rental	cost of calls

Examples of Mixed Costs (cont.)

Automobile lease:

Fixed Component	Varaible Component
fixed cost per day	additional cost per mile for miles driven

Examples of Mixed Costs (cont.)

Maintenance expense:

Fixed Component	Varaible Component
minimum expense required to keep property open and functional	additional expense required with rising occupancy

Examples of Mixed Costs (cont.)

Therefore, you can decompose mixed cost into its fixed and variable elements, this is useful and necessary especially when costs must be forecasted into the future.

Graphical Depiction of Costs

- Fixed cost is presented as a line parallel to the x-axis.
- Variable cost is an upward-sloping straight line.
- Total cost is a combination of the characteristics of fixed and variable costs. It originates at a point on the y-axis corresponding to the fixed cost, and then slopes upwards to the right.

The Algebraic Equation for Total Cost

Total cost = fixed cost + variable cost is presented as,

$Y = a + bX$ where,

Y = total cost (dependent variable)
X = units sold (independent variable)
a = fixed cost (intercept term)
b = variable cost per unit (slope of line)

Operational Decisions

In making operational decisions and forecasting, mixed costs must be correctly estimated. 3 methods of estimating the fixed and variable elements of mixed costs:

Operational Decisions (cont)

1) High/Low two-point method: also termed maximum-minimum method.

Steps to follow:

- Select the highest and lowest points in the distribution.
- Calculate the differences in total mixed cost and activity for the two periods.

High/Low Two-Point Method Steps (cont.)

- Divide the mixed cost difference by the activity difference to determine the variable cost per activity unit.
- Multiply the variable cost per activity unit by the total activity for the lowest (or highest) period to arrive at the total variable cost for the period with the lowest (or highest) activity.

High/Low Two-Point Method Steps (cont.)

- Subtract the above result from the total mixed cost to arrive at fixed cost for that period.

The two points selected are assumed to be a fair reflection of the high and low points for the entire period.

Operational Decisions (cont)

2) Scatter diagram - read on your own (page 257).

3) Regression analysis

Using the equation for a straight line:

$Y = a + bX$,

Operational Decisions (cont)

The formula for determining the intercept term is:

$$a = \frac{(\Sigma y)(\Sigma x^2) - (\Sigma x)(\Sigma xy)}{n(\Sigma x^2) - (\Sigma x)^2}$$

Calculating Fixed Costs

Calculate the total fixed cost for the year (period) by multiplying the above by 12. Then, from the total annual mixed cost subtract the total fixed cost to obtain the total variable cost for the year (period).

Calculating Fixed Costs (cont)

Use the equation for a straight line to calculate the variable cost per unit:

Total mixed cost =
total fixed cost + b(total units)

Direct and Indirect Labor Cost

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Cost

Another way cost is defined is whether or not it directly affects an operated or income-generating department.

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Direct Cost

➭ a cost whose “object” (focus) is an operated department. Such costs typically are the sole responsibility of a particular department manager.

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Direct Cost (cont.)

For example, the direct costs for the rooms department are:

- Payroll and related expenses
- Commissions
- Contract cleaning
- Laundry and dry cleaning, etc.

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Indirect Cost

a cost that cannot easily be identified with a particular department, and therefore, is not the responsibility of a department manager. For example:

- Management fees
- Undistributed operating expenses
- Fixed charges
- Income taxes, etc.

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Cost Allocation

Indirect expenses often need to be allocated to operated departments in order to assess bottom-line performance of these departments. It also helps in pricing decisions, marketing decisions, staffing decisions.

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Allocation Bases

- Square footage
- Revenue ratio
- Number of employees
- Benefits received
- Responsibility for incurrence

Allocation Base Selection

In selecting an allocation base, choose a base that is a cost driver of the indirect cost. A cost driver is a factor that causes indirect costs, eg. machine hours, beds occupied, number of customers, computer time, or flight hours etc.

Allocation Base Selection (cont.)

If a base is used that does not “drive” indirect costs then cost allocations will be distorted along with distortions in departmental profit margins.
Therefore, it is possible to have different allocation bases for different indirect costs.

Allocation Examples

In manufacturing industries direct labor hours or direct labor cost is the most popular basis for allocating indirect cost.

- U.S.: 62% - 74% of manufacturing companies use direct labor hours as primary or secondary allocation base.

  12 % use machine hours.

  14% - 26% use a variety of different allocation bases

Allocation Examples (cont.)

- U.K.: 68% - 73% of manufacturing companies use direct labor hours as primary or secondary allocation base.

Allocation Examples (cont.)

- Japan: 41.7% of manufacturing companies use direct labor hours

  6.4% use machine hours

  43.6% use both direct labor hours and machine hours

  8.3% use other allocation bases.

In hospitality companies, square footage is commonly used since space is a cost driver in this business. Alternatively less sophisticated managers may use revenue contribution as a base.

- Fully allocated income statements must not be used in evaluating a departmental manager's performance.

- Departmental managers may allow the poor performance of a department on a fully allocated income statement to cause them not to make needed investments or repairs in that department.

Decision-making After Indirect Cost Allocation

Sometimes when the performance of a department is unsatisfactory after cost allocation analysis is complete, management may wonder whether to close the department down.

Decision-making After Indirect Cost Allocation (cont.)

Assuming the allocation basis is reasonable, then four factors to consider:

- The size of the department's income before undistributed operating costs.

- Whether the indirect costs are mostly fixed charges or they have more variable component to them.

Decision-making After Indirect Cost Allocation (cont.)

- Whether the presence and performance of the under-performing department affects other profit-centers.

- Operating alternatives for the under-performing department.