

CHAPTER 2

# Building a Basic Budget—Incremental Budgeting

## OBJECTIVES

1. Describe the structure and role of the chart of accounts
2. Explain how income statements and balance sheets are used to assess the performance of management
3. Describe the four steps required to construct an incremental budget
4. Describe the major outputs involved in constructing a budget including when they are needed and who is responsible for producing them
5. Explain how budget preparers selectively use data to increase their budget
6. Explain the strengths and weaknesses of incremental budgeting

## Introduction

One of the most challenging tasks facing first-time managers is constructing a budget that specifies the resource costs needed to run their department in the next year. The annual budget does not consider how long a manager has been in the position or how well the manager understands the department and its processes. First-time managers inherit a department and its budget from others. If promoted internally, the manager might understand parts of the operation but probably do not understand the entire process including all outputs produced, how inputs are transformed into outputs, and how money was spent. If hired from outside, the manager will need to quickly learn the organization, the department's production process, and the budgeting system. Despite these challenges, the manager is responsible for creating a budget, meeting future department goals, and staying within their budget.

Most organizations use an incremental budgeting process due to the complexities of budgeting and finance. Incremental budgets are built on prior expenses, an **expenditure base** that is increased for anticipated changes in input prices. The expenditure base typically consists of current, year-to-date expenses. Current expenditures provide a comprehensive accounting of resources used during the current fiscal year but do not provide the total amount that will be spent over the year since

the budget is often created 6 months before the current year ends. Department managers developing budgets from current data face three major challenges. First, total current-year expenses must be estimated on fewer than 12 months of data; second, anticipated changes in input prices must be incorporated into expense projections; and third, changes in output or production processes that affect resource use should be included in budget requests.

Meeting the budget, or more importantly, getting the job done while staying under the budget, is critical to the success of the organization and a manager's career. Budget overruns may create a host of organization problems: the short-term problem is cash flow: Will the organization have sufficient funds to pay higher-than-anticipated expenses? The long-term implications of budget overruns are lower profits that may require price increases (and potentially alienate consumers) and/or a reduced ability to reinvest in operations. Individual managers may be in a situation in which they have to choose between meeting goals and going over-budget or failing to achieve goals while meeting the budget. Either scenario may have negative consequences for the manager and may reflect on his or her ability to manage.

# Essentials of Accounting II: The Chart of Accounts and Financial Statements

Accounting is an information system reporting on whether organizations and managers create value, i.e., Are revenues from the goods and services sold greater than resources consumed to produce these goods and services? While seemingly a straightforward question, collecting information on revenues and expenses is complicated by the numerous products sold and inputs purchased. For example, one hospital system reports $5,152,000,000 in revenue and $4,895,000,000 in expenses, determining that the organization earned a profit of $257,000,000 requires combining hundreds of thousands of financial transactions. The chart of accounts is used to consolidate financial information and create financial statements to accurately evaluate organizational and managerial performance.

## The Chart of Accounts

The **chart of accounts** assigns a unique number to every financial transaction to aggregate and report financial information. The questions of how revenues are generated and what expenses should be incurred requires budget preparers to specify which outputs will be produced and which inputs will be needed to produce these outputs. On the expense side, every healthcare organization requires various types of labor including medical, management, housekeeping, and maintenance. In small organizations, a single person could perform two or more functions; in larger organizations, a worker may only perform one function. The budgeting question is; How many workers or hours are required to produce the expected output during the budget year?

Managers also need to specify the type and quantity of medical, office, housekeeping, and maintenance supplies, needed to achieve department objectives. Additional expenses include the costs of acquiring, operating, and insuring facilities and equipment such as rent, interest, utilities, and insurance. The chart of accounts summarizes financial transactions in homogenous categories for tracking and control. **Table 2.1** provides the main accounting categories and **Table 2.2** provides the object codes that are aggregated in the main categories.

**Table 2.1 Summary Chart of Accounts**

| Account | |
|---|---|
| **Numbers** | **Description** |
| 1000–1999: | Assets |
| 2000–2999: | Liabilities |
| 3000–3999: | Equity |
| 4000–4999: | Expense |
| 5000–5999: | Revenue |

**Table 2.2 Detailed Chart of Accounts**

| Assets | Current Assets | 1010 | Cash |
|---|---|---|---|
| | | 1020 | Accounts Receivable |
| | | 1030 | Inventory |
| | | 1040 | Prepaid Expense |
| | Long-Term Assets | 1200 | Land |
| | | 1300 | Equipment |
| | | 1350 | Accumulated Depreciation, Equipment |
| | | 1400 | Building |
| | | 1450 | Accumulated Depreciation, Buildings |
| | | 1500 | Investments |
| | Other Assets | 1800 | Other |
| | | | |
| Liabilities | Current Liabilities | 2010 | Accounts Payable |
| | | 2020 | Notes Payable |
| | | 2030 | Accrued Wages |
| | | 2385 | Current Portion of Long-Term Debt |
| | Long-Term Liabilities | 2510 | Long-Term Debt |
| | | | |
| Equity | | 3000 | Owner's Equity/Fund Balance |
| | | | |

*(continues)*

**Table 2.2** Detailed Chart of Accounts (*Continued*)

| Assets | Current Assets | 1010 | Cash |
|---|---|---|---|
| Expense Accounts | | *4010* | Management (Physician) Salaries |
| | | *4015* | Staff Salaries |
| | | *4110* | FICA |
| | | *4120* | Health Insurance |
| | | *4130* | Retirement |
| | | *4140* | Unemployment |
| | | *4150* | Other Fringe Benefits |
| | | *4210* | Clinical Supplies |
| | | *4250* | Office Supplies |
| | | *4310* | Rent |
| | | *4350* | Repair and Maintenance |
| | | *4410* | Electricity |
| | | *4420* | Gas |
| | | *4430* | Water and Sewage |
| | | *4440* | Telephone |
| | | *4510* | Insurance (Malpractice, Casualty, Auto) |
| | | *4610* | Depreciation |
| | | *4710* | Interest Expense |
| | | *4810* | Shipping and Freight |
| | | *4910* | Marketing Expenses |
| | | *4920* | Uniforms and Laundry |
| | | *4930* | Housekeeping |
| | | *4940* | Travel, Lodging, and Meals |
| | | *4950* | Education and Training (CME) |
| | | *4960* | Other Expenses |
| | | | |
| Revenues | | *5010* | Operating Revenue |
| | | *5210* | Nonoperating Revenue |

The chart of accounts allows managers and employees to track expenses by line item to determine when excessive resources have been consumed. When labor costs are higher than expected, managers must determine which types of labor, management, staff, and overtime are overbudget and whether actual expense is too high relative to output. When pharmaceutical costs are higher (or lower) than expected, what medicines are over- (or under-) budget? If overbudget, is it due to higher prices or higher use? If greater use increases pharmaceutical costs, is higher utilization or loss and spoilage the cause? If more medications are being prescribed, are the prescriptions appropriate or should utilization be controlled? **Figure 2.1**, a chart of accounts tree, provides a visualization of the total expenses.

Controlling costs requires managers to understand the appropriate, if not the minimum, amount of each input needed to produce a product, i.e., managers must be able to identify when excess resources are used and initiate action to reduce waste. At the close of an accounting period, all financial transactions are summarized to produce financial statements, i.e., object codes 4010 and 4015 are reported as total salary and wages, object codes 4210 through 4250 as supply expense, and object codes 4010 through 4960 report total expenses for the accounting period.

## Financial Statements

Financial statements report performance and should guide managers. The two primary financial statements are income statements and balance sheets. The **income statement** reports on financial performance, the relationship between revenues and expenses during an accounting period, typically by the month or the year, **Table 2.3**.

The **balance sheet** reports the assets used to support operations at a point in time, i.e., the end of an accounting period and how the assets are financed. Assets are provided or financed by the organization's owners (equity or net worth) or creditors (liabilities), **Table 2.4**. The balance sheet lists assets and liabilities by liquidity, how soon an asset or liability is expected to be converted to cash with the most liquid (or current) assets and liabilities reported first and the least liquid (or long-term) items last.

The financial statements report on the operations and assets for which managers are responsible and how they were used. Profit is a prime indicator of management performance. During the 2018 fiscal year, Smith earned $25,853,000. While many may think this is a robust profit, management performance should be judged on the relationship between profit and total revenue, total assets, and equity. **Total margin**, profit divided by total revenue, shows management's ability to turn sales into profit. The total margin is 10.2%, $25,853,000 ÷ $253,573,000 or Smith earned 10.2¢ for every dollar of revenue generated. Total margin recognizes that profit should increase with the amount of goods and services sold and larger organizations should earn higher profits than smaller organizations.

Profits should also increase with the resources invested in the operation. **Return on assets (ROA)**, profit divided by total assets, shows management's ability to turn assets into profit. Smith's ROA is 5.9%, $25,853,000 ÷ $440,075,000 or Smith converts every dollar of assets into 5.9¢ of profit. **Return on equity (ROE)**, profit divided by equity, shows management's ability to turn owners' investment into profit. ROE is 13.4%, $25,853,000 ÷ $192,529,000. Compared with 2015 benchmarks, Smith's performance substantially exceeds the averages for all

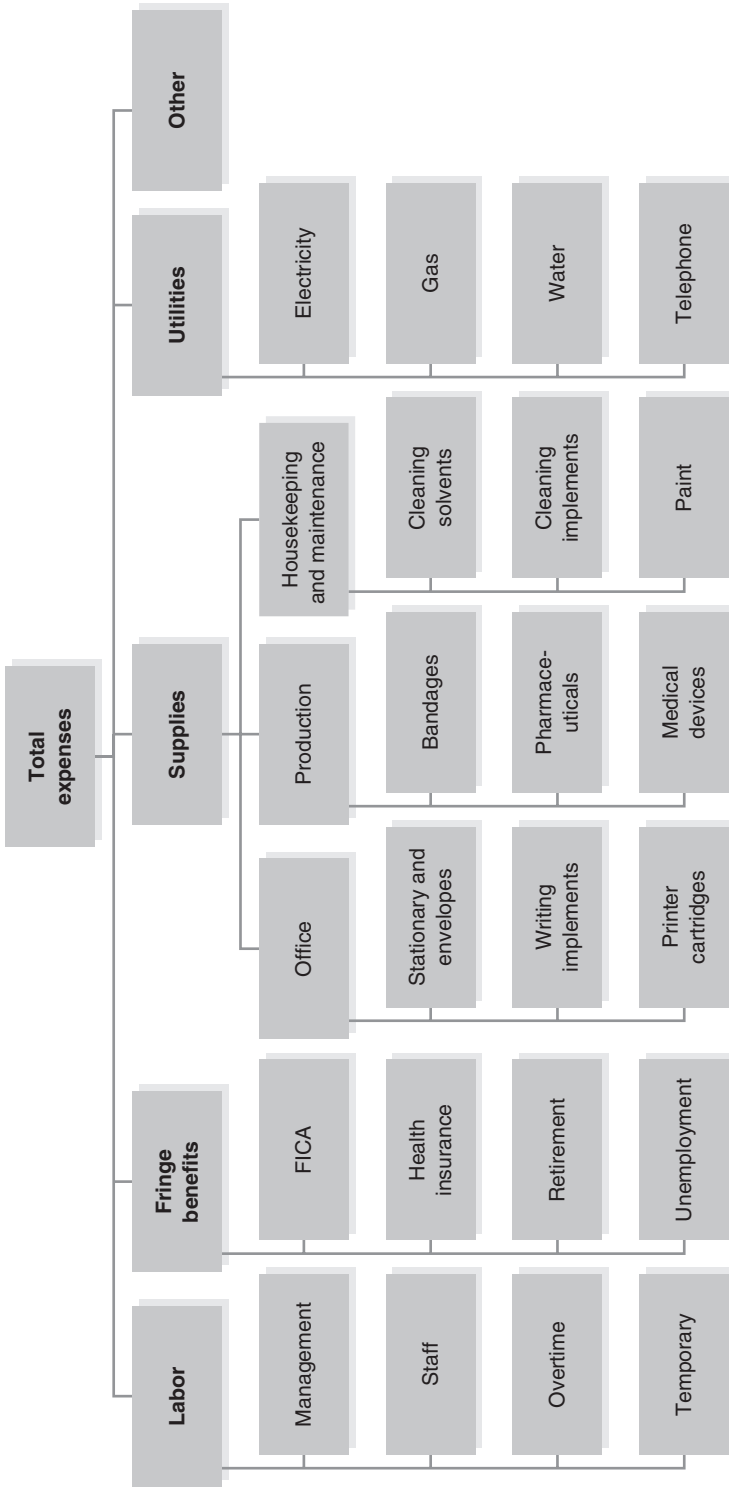


**Figure 2.1** Chart of Accounts Tree

**Table 2.3** **Smith Medical Center Income Statement**

| | Object Code | 2018 |
|---|---|---|
| Operating revenue | 5010 | $251,102,000 |
| Non-operating revenue | 5210 | 2,471,000 |
| Total Revenue | | $253,573,000 |
| | | |
| | | |
| Salaries and wages | 4010 + 4015 | $73,970,000 |
| Fringe benefits | Σ4110…4150 | 27,305,000 |
| Supplies | Σ4210…4250 | 53,267,000 |
| Utilities | Σ4410…4440 | 6,669,000 |
| Interest | 4710 | 12,102,000 |
| Depreciation | 4610 | 13,935,000 |
| Other | all else | 40,472,000 |
| Total Expense | | $227,720,000 |
| | | |
| Profit | | $25,853,000 |

**Table 2.4** **Smith Medical Center Balance Sheet**

| | Object Code | 2018 |
|---|---|---|
| Cash | 1010 | $21,605,000 |
| Accounts receivable | 1030 | 78,035,000 |
| Inventory | 1020 | 6,198,000 |
| Land, buildings, & equipment | Σ1300…1450 | 252,598,000 |
| Investments | 1500 | 41,394,000 |
| Other assets | 1800 | 40,245,000 |
| Total Assets | | $440,075,000 |
| | | |
| Accounts payable | 2010 | $27,508,000 |
| Long term liabilities | 2510 | 220,038,000 |
| Total Liabilities | | $247,546,000 |
| | | |
| Equity | 3000 | $192,529,000 |

hospitals; Smith's total margin = 10.2% versus 3.8% benchmark, ROA = 5.9% versus 3.7%, and ROE = 13.4% versus 7.0%, indicating management is doing a good job managing revenues, expenses, and assets. Assessing management performance will be revisited in Chapter 7: Leveraging Financial Information to Improve Performance and Outcomes.

A basic understanding of accounting is essential for managers as the accounting structure *is* the budgeting structure. Managers develop revenue and expense estimates for their departments and these estimates are then compiled into **pro forma financial statements**, i.e., the master budget based on assumptions about future events. Finance complies the master budget to determine whether the proposed plan is feasible; Are expected revenues greater than planned expenses? Managers should understand how financial statements are created, and more importantly, what accounting reveals about performance.

# The Incremental Budgeting Process

An incremental budget is a budget built on past or budgeted revenues and expenditures increased for expected changes in prices. The main objective of an incremental budget is to ensure that actual expenses are no more than total anticipated spending. Incremental budgets are most appropriate when output and revenue projections are relatively certain. That is, the type and quantity of output expected and money flowing into the organization has been and will continue to be stable. **Incremental budgeting** should be used in environments where there is little chance of dramatic swings in the demand for goods and services and risk that costs may not be recovered. Given relatively stable output, managers should be capable of producing accurate estimates of future expenses.

Incremental budgeting is primarily a process of identifying what has been spent (or planned to be spent) and augmenting these expenditures for anticipated price increases. The budget construction process has four steps, **Table 2.5**, beginning with identifying an expenditure base (Ross, 2018).

An expenditure base determines the starting point for building a budget and the set of expenses that will be used to estimate budget year expenses. The typical expenditure base is current year-to-date (YTD) expenditures; other expenditure bases are the current budget or actual expenses for the last completed fiscal year. The advantage of using the current year budget or actual expenditures for the last completed fiscal year over current YTD expenditures is they provide a projection of what total expenses should be over 12 months. On the other hand, the advantage of using current YTD expenditures is that it reports actual expenses (current input quantities at current input prices) versus budget estimates (anticipated input

**Table 2.5 The Incremental Budgeting Process**

1. Identify the expenditure base
2. Identify inflation factors and timing
3. Multiply expenditure base and inflation factor
4. Modify for anticipated changes in expenses arising from changes in output, new production processes, regulatory mandates, and sum for all object codes

quantities at anticipated prices) or prior year expenditures (last year's input quantities at last year's prices) and captures all changes not anticipated in the budget. The issue with all three expenditure bases is they provide information on what *was* spent rather than what *should* be spent and will overestimate necessary expenses when previous waste is included in budget allocations.

Each expenditure base is unique and different work is needed to produce budget estimates. Current YTD expenditures must be annualized, increasing partial-year expenses to the anticipated amount they will be at the end of the fiscal year (actual YTD expenses ÷ number of months reported = average monthly expenditure × 12 months). **Annualization** produces a reasonable estimate of expenditures over 12 months when expenses do not vary significantly throughout the year. If output and expenses are significantly higher (lower) in the first half of the year, annualization will over- (under-) estimate resource need when output is lower (higher) at the end of the fiscal year. Seasonality, the periodic fluctuation in demand, should be recognized in budget estimates when it has (or should have) a significant impact on resource use. For example, inpatient admissions are typically higher in November and March versus December and February. Although these fluctuations may not significantly affect total demand, not recognizing these fluctuations may result in over-staffing in December and February and under-staffing in November and March.

If the last full year of data is used as the expenditure base, expenses will be 2 years out-of-date when the budget year starts. Expenditures from the last full fiscal year must be increased for 2 years of input price increases. Similarly, using the current year's budget as the expenditure base provides anticipated spending for a whole year at estimated current year prices. If price increases were relatively accurate and no major changes occurred in output or expenses, the budget would only need to be increased for anticipated price increases in the upcoming year. The weakness of the data from the last completed fiscal year or current year budget is neither include new expenses or eliminate unneeded past expenses. In the absence of instruction on the expenditure base to use, budget-savvy managers will generally choose the base with highest starting point to maximize their budget.

The second step determines the **inflation factor**, i.e., the appropriate rate to increase line-item expenditures. Different inputs required to produce goods and services will not increase at the same rate and it is possible that prices of some resources will decrease as others increase. A review of the major expenses of labor and supplies demonstrates that salary increases for skilled and unskilled workers differ and price increases for medical, office, and other supplies also differ.

The budget office may provide guidance on the expected price increases based on an index like the **Producer Price Index (PPI)**. The PPI reports on past price changes; the rate of increase for the budget should be based on experience as the past does not predict the future. Department managers understand their expenses better than senior managers or finance and should review any guidance provided on expected price increases and challenge (with supporting documentation) any they believe will not cover anticipated price hikes. For example, the pharmacy director may understand drug pricing and anticipated increases better than either planners or finance.

In addition to the rate of increase, the timing of the increase must also be included in the budget; Will input prices increase at the beginning of the year or

throughout the entire year? Managers will try to make the inflation factor as large as possible and apply the price increase to the first month of the fiscal year to maximize their budget.

The third step is the easiest; multiply the expenditure base by the expected change in prices for each budget line. If the expenditure base for wages is $1,000,000 and salary increases are expected to be 2.0% effective on the first day of the budget year, the salary estimate is $1,020,000 ($1,000,000 × 1.02). When wage increases are given on the first day of the 7th month of the fiscal year, anticipated salaries would be $1,010,000 ($1,000,000 × (1 + (0.02 × (12 ÷ 6))).

Step 3 produces a budget assuming only input prices have changed. Step 4 takes into account that other factors may change; it is unusual for an organization or department to do everything exactly the same in the future as it did in the past and inputs will simply cost more. Adjustments must take changes into account in the quantity or quality of output produced or changes in production processes or regulatory mandates (such as OSHA, EPA, etc.), which will affect expenses.

These adjustments may have a small impact on the total budget but the failure to make these adjustments ensures projected expenses will be inaccurate (either too high or too low). If output is expected to grow by 1.0%, all *variable* expenses should increase proportionately above any price increase. Fixed expenses should not be affected. The budget may not be understated by much if volume adjustments are not made for small increases in output but if past budgets were reasonably efficient, it will guarantee the department goes over its budget. If prior budgets provided more resources than required to complete work, failure to add new expenses will probably not make the department overrun its budget since it has a cushion to absorb small increases in expenses. Increases in output that will substantially increase expenses should be budgeted. For example, a 5.0% increase in output probably cannot be accommodated simply by reorganizing operations and economizing.

Managers must anticipate other changes that increase (or decrease) the time needed to deliver care and the cost of technology. Unlike other industries, replacing equipment in health care often increases production costs. In radiology, replacing a 16-slice CT scanner with a 128-slice scanner will more than double the cost of equipment (and annual depreciation) and increase annual service costs by 40%. The financial impact of foreseeable changes in labor, supply, and equipment costs should be incorporated into the budget to avoid explaining why the department overspent its budget after the fact. Managers are generally diligent about adding small, expected cost increases into their budget requests while generally ignoring changes that should translate into smaller budgets. After object codes are increased for expected price changes and changes in output, production methods, or regulatory requirements, they are summed to determine the total department expense. The completed budget request is sent to the budget office to be added to the requests of other departments to determine total organization expense and compare with expected revenues.

The incremental budgeting approach is a quick and simple way to create a budget that does not require a deep understanding of the department and is easily defended. In incremental budgeting, if an expenditure was made last year, it should continue. In other words, every expenditure made in the last year not only continues but is also increased to ensure that the same amount of resources can be purchased if the input price increases. Beyond minor complaints over inflation, which may be as trivial as should paper supplies increase by 3% or 4%, incremental budgeting minimizes conflict. The necessity of continuing historical resource use or

supplementing the budget for increases in output are seldom challenged. Incremental budgeting minimizes conflict between senior managers, department managers, and finance over resource allocation. Incremental budgets avoid unending conflict over the organization's priorities; past priorities remain priorities and the potential anxiety of managers and employees over budget reductions is eliminated.

This type of budgeting is called incremental since expenses are increased (incremented) from year to year to accommodate changes in input prices to provide managers with constant access to resources. Departments receive sufficient funding to buy the same amount of inputs and produce the same amount of outputs as in the past. Incremental budgets are also called fixed or static budgets because after the budget is finalized, expense allocations do not increase or decrease with changes in output. Managers get a fixed set of resources, hours, supplies, equipment, and space to complete their tasks and can make decisions and take action knowing how much money they have to achieve their department's goals.

Incremental budgeting can be the most desirable method for estimating future expenses when the following assumptions are true: prior production methods were effective and efficient, goods and services fulfill the intended objective, and output is stable. The main issue with incremental budgets is they encourage department managers to spend their entire budget because unspent funds may be lost and managers may see permanent cuts to future budgets.

The fundamental unit of analysis or concern in incremental budgets is total input expense. Incremental budgeting asks three questions: What types of inputs were used in the past? How many units were used? What was their cost? The first two questions are often ignored and managers simply increase the amount spent in the expenditure base to produce the expense budget. Knowing the number and type of workers is essential when production methods or output changes because the impact on the budget differs based on whether high- or low-skilled employees are added or subtracted from a production process. While knowing the types and quantities of inputs are not necessary for creating an incremental budget, managers must understand these things to understand and improve production processes.

Instead of year-to-year budget augmentation, managers should ask the following question: Will the same production process and mix of inputs be used in the upcoming budget period as previously? Can output be expanded and the cost per output be reduced by substituting higher- or lower-priced inputs? Adding a more skilled and higher paid employee while subtracting less skilled and lower paid employees could lower the cost per output depending on productivity. **Productivity** is output per worker. Economically, it is desirable to use an input costing 10% more than a substitute if its productivity is more than 10% higher, all other things being constant. For example, if a worker who is paid $15.00 an hour produces three outputs per hour and a higher skilled worker who receives a wage of $20.00 an hour (33% more) can produce five outputs (67% more), costs will be lower when the higher skilled and paid worker is used. Another way of examining this issue is by the cost per output produced; the wage component is $5.00 per unit ($15.00 ÷ 3 units) for the lower paid worker and $4.00 ($20.00 ÷ 5 units) for the higher paid worker. On the other hand, costs can be reduced if a worker earning $20.00 per hour and producing five outputs can be replaced by two workers earning $11.00 who can produce three outputs each. Similarly, contracting housekeeping and dietary services to external service providers, moving transcription services offshore, and using voice recognition systems are all undertaken to reduce production costs. Managers should

understand input prices and productivity to identify the lowest-cost combination of inputs consistent with meeting the needs or desires of customers.

**Table 2.6** shows a typical budget request form. Managers are often overwhelmed by the numerous expenditures in this form. It can be difficult to see the structure and organization in the budget when expenses total hundreds of thousands or millions of dollars. If a budget is $2,000,000 or more, it easy to become frustrated and not understand all the relationships involved in the budget. The job of a manager, however, is to create value by understanding how each input contributes to the department's output. The challenge is that each object code may have many inputs. Regular salaries, object code 4020, may include multiple

**Table 2.6** Budget Request Form

| Object Code | Description | Last Year 2018 | YTD Actual 2019 | YTD Budget 2019 | Budget Request 2020 |
|---|---|---|---|---|---|
| 4020 | Staff salaries and wages | $2,066,350 | $1,235,642 | $1,105,000 | _____ |
| 4030 | Management and clerical staff | 331,200 | 176,543 | 180,000 | _____ |
| 4040 | Overtime | 206,635 | 166,812 | 110,500 | _____ |
| 4050 | Per diem/ agency nurses | 374,400 | 156,115 | 204,000 | _____ |
| 4110 | FICA | 199,220 | 120,793 | 106,756 | _____ |
| 4120 | Health insurance | 278,760 | 149,857 | 151,500 | _____ |
| 4130 | Retirement | 119,878 | 70,609 | 64,250 | _____ |
| 4140 | Unemployment | 26,042 | 17,369 | 15,351 | _____ |
| 4210 | Floor medications | 22,398 | 13,589 | 12,775 | _____ |
| 4212 | Medical instruments | 18,596 | 5,798 | 9,000 | _____ |
| 4214 | Bandages, gauze, etc. | 9,741 | 5,643 | 5,110 | _____ |
| 4216 | Latex gloves, gowns, etc. | 52,899 | 32,145 | 29,383 | _____ |
| 4218 | Sterile wipes | 5,211 | 2,659 | 2,555 | _____ |
| 4250 | Office supplies | 8,452 | 4,268 | 4,599 | _____ |
| 4280 | Cleaning supplies | 1,202 | 569 | 500 | _____ |

| Object Code | Description | Last Year 2018 | YTD Actual 2019 | YTD Budget 2019 | Budget Request 2020 |
|---|---|---|---|---|---|
| 4350 | Biomedical repairs/ maintenance | 5,244 | 3,869 | 3,000 | _____ |
| 4410 | Electricity | 2,453 | 1,156 | 1,200 | _____ |
| 4440 | Telephone | 5,794 | 2,645 | 2,880 | _____ |
| 4930 | Housekeeping | 138,240 | 72,000 | 72,000 | _____ |
| 4940 | Travel/ professional meetings/meals | 35,789 | 14,523 | 17,850 | _____ |
| 4950 | CME | 8,425 | 3,688 | 4,600 | _____ |
| 4960 | Other expenses | 4,953 | 1,258 | 1,655 | _____ |
| | | $3,921,882 | $2,257,550 | $2,104,462 | _____ |

employees with diverse skills such as RNs, LPNs, and CNAs. Managers should understand everything in the object code and how it contributes to the department and organizational goals. Gaining this knowledge requires effort and cooperation among department managers and the budgeting and accounting departments.

Combined financial data as reported in Table 2.6 merely records how money is spent; it often does not provide much information about what inputs were used, methods of production, and the inter-relationships between inputs. The mission of organizations is to provide effective and pleasing goods and services at competitive prices; managers should understand how their department, processes, and budget contribute to satisfying customers. Budgets describe the operating plan in dollars and cents. The bottom line on a monthly or annual expense report tells the manager whether their department is over- or under-budget but the report doesn't specify why the operation is spending more or less than expected. The department in Table 2.6 is over-budget by $98,193 or 4.9% (($2,103,253 – $2,004,769) ÷ $2,004,769) for the first 6 months of 2018. The ability to track expenses by object code assists managers in identifying why the department is over- or under-budget and where operations should be assessed and possibly improved.

The chart of accounts tree, Table 2.6, allows a manager to see where their major expenses are and whether these expenses can and should be controlled. When 2018 expenses are diagrammed in a chart of accounts tree, **Figure 2.2**, it is easy to see that the lion's share of this department's expenses are labor-related, 91.5%, 75.1% wages + 16.4% fringe benefits. The largest expenses outside of salaries and benefits are housekeeping, 4.1% of total expenses; and supplies, 3.1% with disposable gloves and gowns; constituting 48.6% ($52,899 ÷ $108,845) of total medical supply costs. Any attempt to lower costs must address salaries and benefits because reducing supplies or other low-expenditure areas will have little or no impact on the overall financial situation.

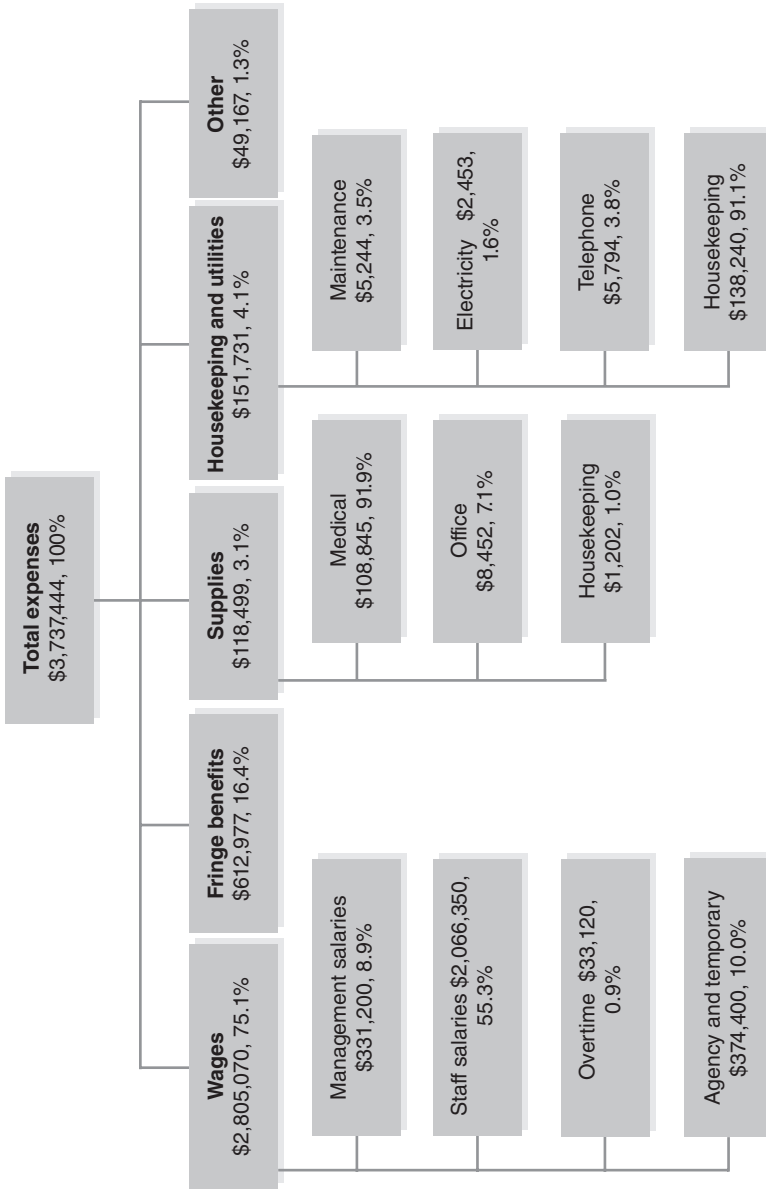


**Figure 2.2** Chart of Accounts Tree

While the chart of accounts tree helps a manager to see where expenses arise, the budget request form (or monthly variance report) allows managers to determine what expenses are higher than budget and focus the search on where costs can and should be reduced. If operations are overbudget, a variance report shows if it is due to labor, supplies, housekeeping, utilities, or other items. Given that labor accounts for 91.5% of total expenses, a variance report will indicate if the higher-than-expected expense is the result of changes in manager or staff salaries, overtime, or temporary labor. Judgments of a department manager's performance should not be based on the sole criterion of whether he or she comes in at or under-budget. Performance assessments should be based on whether the expected work was completed and whether deviations from budget were appropriate and/or controllable. Managers should only be responsible for unnecessary and controllable increases in expenses. Managers should not be held accountable for uncontrollable increases in inputs required to meet customer expectations.

## Starting the Budgeting Process

A single budgeting cycle can take up to 24 months to move from initial budget preparation to final review of operations. The budget preparation process generally begins 6 months before the start of a fiscal year as it involves five major steps and three groups of employees. The **budget calendar**, **Figure 2.3**, documents the required work, when it should be produced, and who is responsible for the work. The process starts with the estimate of budget year output by senior managers and then the output forecast is incorporated into the budget package developed by the budget office. The budget package includes the output estimate, guidance on expected price increases, instructions, forms, and submission deadlines. After budget packages are delivered to department managers, they typically have 2 to 6 weeks to submit their expense requests.

Department managers receive information similar to what is in Table 2.6. The budget request form provides the necessary information to prepare the budget. The budget request form generally contains four parts: the object of the expenditure (the object code and description of expense), the amount spent in the last completed fiscal year (2018), the amounts spent and budgeted in the current budget year (2019), and blanks for inserting the budget request for the next fiscal year (2020).

The chart of accounts should provide neither too much or too little information. Too much information occurs when managers cannot identify relevant trends because too much detail is provided. For example, labor hours are reported by employee so identifying growth by type of employee, e.g., RN, LPN, or CNA is difficult. Too little detail occurs when a manager cannot identify excessive consumption or exercise control over inputs because information on the use of resources is too highly aggregated and/or all labor expenses are consolidated into a single category so higher wages cannot be traced to staff, management, overtime, or temporary personnel. There should be separate object codes for each input that has a significant impact on the department's operations and expenses. Fortunately, the increased capabilities of information systems are enabling managers to access a higher level of information. Future managers may be able to determine the level of aggregation they need in a report and customize the monthly or annual financial reports to meet their goals.

| | Budget building | | | | | Budget management | Budget review | |
|---|---|---|---|---|---|---|---|---|
| **Time:** | –6 months | –5 months | –4 months | –3 months | –2 to –1 months | +1 to 12 month | +13 to +18 months | |
| **Output/Role:** | Output forecast | Budget package | Assemble expense budget | Compile master budget | Approve budget | Manage to budget | Year-end closing | Performance reviews |
| **Responsibility:** | Senior management | Budget office | Department managers | Budget office | Senior management | Department managers | Finance/ Budget office | Senior and department managers |

**Figure 2.3** A Budget Calendar

The second part of the budget request, Column 3, is often last year's spending in the object code. Although this information may be 1 year removed from current operations, it gives managers an understanding of total annual spending for the year for each line item. This information is valuable when combined with the current year budget and actual expenditures to understand the timing of expenses that are not incurred evenly over a year.

The third and fourth parts are the comparison of YTD actual expenditures, Column 4, with the YTD budget, Column 5. This comparison is needed to determine the accuracy of the budget and/or the effectiveness of management. If the department is overbudget, do the higher-than-expected expenses indicate that the budget underestimated resource needs or lack of management control over resources? If underbudget, are lower expenses due to overestimation of resource needs or superior management of resources? When expenses are underbudget, will lower costs continue? If the lower costs are expected to continue, the budget should be based on the lower YTD actual expenses. If the lower costs cannot continue, the current budget may provide a better foundation for estimating future expenses. The appropriate expenditure base could vary by type of expense and a budget could be constructed using all three expenditure bases (Columns 3 through 5). The choice of expenditure base should be determined by what has occurred, why it occurred, and whether it will continue rather than which base produces the largest budget.

The fifth part, Column 6, is blanks for the entry of the budget request, i.e., the expenditure base multiplied by the inflation factor. In addition to the historical financial information, the budget package may include instructions on how the budget should be constructed, the expenditure base(s) for budget projections; inflation factors; and a budget calendar with dates for submission, review, feedback, resubmission, if required; and approval.

# Building an Incremental Budget

The following section presents an example of constructing a budget for nursing unit, North 2 Medicine; the CEO requested that all departments submit their 2020 operating budgets by August 31, 2019. The 2020 fiscal year begins on January 1, 2020. The YTD expense report, **Figure 2.4** was distributed 6 weeks prior to the submission deadline to assist departments in preparing their budgets.

The economic outlook for the healthcare industry is continuing financial pressure due to restrictive Medicare and Medicaid reimbursement given the current economic growth and high federal budget deficits. Given the financial pressure, salary increases for all personnel including management should be budgeted at 3.0%. Senior management realizes that a 3% increase may not please all employees but managers are encouraged to remind their employees that this increase was almost twice the rate of increase in the consumer price index (1.6% for the 12 months ending in January 2019). Salary increases will be effective on the first day of the budget year. Health insurance costs are expected to increase by 6.0%. An across-the-board increase of 2.0% should be used for all supplies (42xx) with the exception of floor medications, 4210, which should be budgeted at 5.0%. A 4.0% rate increase for electricity, recently passed by the Citizens Utility Board, took effect in October 2019

| Object Code | Description | Last Year 2018 | YTD Actual 2019 | Step 1 YTD Budget 2019 | Annualization | Projected Budget 2019 | × | Step 2 1 + Inflation Factor | = | Step 3 Budget Request 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| 4020 | Staff salaries and wages | $2,066,350 | $1,235,642 | $1,105,000 | 12/6 | $2,210,000 | | 1.03 | | $2,276,300 |
| 4030 | Management and clerical | 331,200 | 176,543 | 180,000 | 12/6 | 360,000 | | 1.03 | | 370,800 |
| 4040 | Overtime | 206,635 | 166,812 | 110,500 | 12/6 | 221,000 | | 1.03 | | 227,630 |
| 4050 | Per diem/agency nurses | 374,400 | 156,115 | 204,000 | 12/6 | 408,000 | | 1.03 | | 420,240 |
| 4110 | FICA | 199,220 | 120,793 | 106,756 | 12/6 | 213,512 | | 1.03 | | 219,917 |
| 4120 | Health insurance | 278,760 | 149,857 | 151,500 | 12/6 | 303,000 | | 1.06 | | 321,180 |
| 4130 | Retirement | 130,209 | 78,950 | 69,775 | 12/6 | 139,550 | | 1.03 | | 143,737 |
| 4140 | Unemployment | 23,438 | 14,211 | 12,560 | 12/6 | 25,119 | | 1.03 | | 25,873 |
| 4210 | Floor Medications | 22,398 | 13,589 | 12,775 | 12/6 | 25,550 | | 1.05 | | 26,828 |
| 4212 | Medical instruments | 18,596 | 5,798 | 9,000 | 12/6 | 18,000 | | 1.02 | | 18,360 |
| 4214 | Bandages, gauze... | 9,741 | 5,643 | 5,110 | 12/6 | 10,220 | | 1.02 | | 10,424 |
| 4216 | Latex gloves, gowns... | 52,899 | 32,145 | 29,383 | 12/6 | 58,766 | | 1.02 | | 59,941 |
| 4218 | Sterile wipes | 5,211 | 2,659 | 2,555 | 12/6 | 5,110 | | 1.02 | | 5,212 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 4250 | Office supplies | 8,452 | 4,268 | 4,599 | 12/6 | 9,198 | 1.02 | 9,382 |
| 4280 | Cleaning supplies | 1,202 | 569 | 500 | 12/6 | 1,000 | 1.02 | 1,020 |
| 4350 | Biomedical repairs/ maintenance | 5,244 | 3,869 | 3,000 | 12/6 | 6,000 | 1.01 | 6,060 |
| 4410 | Electricity | 2,453 | 1,156 | 1,200 | 12/6 | 2,400 | 1.04 | 2,496 |
| 4440 | Telephone | 5,794 | 2,645 | 2,880 | 12/6 | 5,760 | 1.01 | 5,818 |
| 4930 | Housekeeping | 138,240 | 72,000 | 72,000 | 12/6 | 144,000 | 1.01 | 145,440 |
| 4940 | Travel/professional meetings/meals | 35,789 | 14,523 | 17,850 | 12/6 | 35,700 | 1.01 | 36,057 |
| 4950 | CME | 8,425 | 3,688 | 4,600 | 12/6 | 9,200 | 1.01 | 9,292 |
| 4960 | Other expenses | 4,953 | 1,258 | 1,655 | 12/6 | 3,310 | 1.01 | 3,343 |
| | | $3,929,609 | $2,262,733 | $2,107,198 | | $4,214,395 | | $4,345,350 |

**Figure 2.4** Screenshot Completed Budget Request

and will affect the entire budget year. All other nonspecified expenses should be budgeted for a 1.0% increase. Given the current budget overrun, YTD actual is 7.4% above budget and 15.2% above 2018; department managers were instructed to use YTD budget as the expenditure base.

The budget request is for 3.1% more than the projected budget for 2019 ($4,345,350 ÷ $4,214,395) and 10.6% more than spent in 2018 ($4,345,350 ÷ $3,929,609).

Despite the incremental budget assumption of no major changes in output or production methods, changes in each are often added into budgets on an impromptu basis. If output, patient days, is expected to increase by 1.0% due to a growing and aging population, increasing the budget request for variable expenses by an additional 1.0% would be reasonable. Similarly, if changes in treatment methods increase the amount of time nurses must spend with the patient without spending less time in other areas such as record keeping, this change will increase total labor expense. Modifying budgets for changes in actual output will be discussed in Chapter 4: Incorporating Actual Output into the Budget—Flexible Budgeting.

Budget modifications, Step 4, are biased toward incorporating cost-increasing changes and ignoring changes that reduce the amount of resources needed. Requests for additional staff or resource above the expenditure base plus inflation should be made for known increases in output, changes in production methods, and/or regulatory mandates. Managers should note these additions in the narrative they submit with their budget request and why these additional resources are needed rather than simply submitting a higher budget and hoping that the increase goes unnoticed through the approval process. Large budget increases are easy to identify during budget review and even easier to reject when money is tight. Increases based on documented changes in production processes have a better chance of being approved. It is assumed that output on North 2 Medicine would be constant so no adjustments were made to the budget.

## *Pre-Submission Review*

Before a budget is submitted, department managers should review their work for mathematical accuracy. Managers should verify that all calculations including projected actual amounts (if required), input price adjustments, and totals are accurate. Managers do not want their budget and themselves to be scrutinized due to avoidable mathematical errors.

Managers must also ensure their budget adheres to budget directives, i.e., uses the specified expenditure base and inflation factors and is submitted on time. If the expenditure base or inflation factors do not follow directives, the budget preparer should note why the base or factor was not used and what was substituted in its place. Managers who fail to follow budget directives can expect increased scrutiny from budget reviewers.

Finally, the department manager should confirm that the budget is reasonable. A preliminary review should evaluate the requested budget relative to annualized YTD actual expenditures and the current year budget. What is the year-to-year increase and will the size of the increase be noticed? One of the first things budget reviewers look at is year to year percentage increases so managers should anticipate questions and be prepared to respond when large increases

are requested. Conversely, managers should be confident that operations can be completed within the constraints of this budget. Department managers generally understand market conditions and anticipated input price changes in their area of expertise better than others and know when their budget should be increased for higher than suggested inflation rates, output increases, and/or costlier production methods. If any of these factors arise, use of prior expenditures (YTD budget or YTD actual) will result in underestimating future resource needs. Department managers are ultimately responsible for ensuring their budget provides sufficient resources to complete expected performance without going overbudget.

## The Story Behind the Numbers

Managers and employees quickly learn how to maximize their own benefits and budget incentives are quickly acted upon. Managers seek to maximize their budgets as more resources increase the probability that they can meet performance targets and reduce the efforts required to meet targets. Managers have an incentive to overestimate output, use the expenditure base that maximizes their budget, and seek the highest possible inflation factors. While incremental budgets often overestimate resource needs, they provide managers with a stable monetary target. Managers know exactly how many resources they have and can make commitments without fear that funds will be reduced. Variance reports allow managers to see, on a monthly basis, whether they are over- or underbudget and make adjustments to ensure year-end expenses meet their budget. The budget directive and managerial incentive is clear—do NOT exceed your budget. The second strength of incremental budgets is they are so easy to calculate and the time and cost of budget preparation is minimal. Incremental budgets can be completed in four steps and do not require deep insight into operations because past expenses are increased for anticipated changes in input prices. Finally, incremental budgets allow managers to focus on major changes from the base year to the budget year. Managers do not have to justify every dollar spent and how the department functions but can focus on significant changes in output, production methodology, and/or programs and how they affect input use and expenses.

One of the chief weaknesses of an incremental budget is its emphasis on not over-spending the budget, which disregards effectiveness (accomplishing a task) and efficiency (minimizing cost per unit or maximizing output from a set of inputs). Incremental budgets tend to institutionalize past practices and encourage budgets to be completely spent regardless of the return obtained from expenditures to avoid future budgets reductions. Unspent funds may produce permanent budget cuts as future expenditure bases may not include the unused funds.

The second weakness is that budget allocations are not connected to actual output and thus managers often overstate output to obtain larger budgets knowing that falling short of forecasts will not result in budget reductions. The incentive to overstate output in conjunction with the incentive to spend the entire budget often produces budgets that provide more than the efficient level of resources. Separating actual output and budget allocations makes it harder for departments experiencing

increases in demand for their services to meet their budget and easier for those with lower demand than anticipated. Managers whose departments must produce higher than forecasted output may reduce quality of care to deliver more care from a fixed set of resources while resources are underemployed in departments with lower than expected demand. Finally, incremental budgeting provides minimal incentives for managers to consider alternative production methods. Incremental budgets implicitly accept (by funding) current production methods so managers don't need to stay current on emerging developments in the use of inputs, new equipment, or methods.

A budget's purpose is not to detail what will be spent in the future but to guide and improve performance. Because the primary incentive in an incremental budgeting system is to spend the entire budget, superior performance evaluation and compensation systems should reward managers and employees for completing their objectives and bringing expenses in below budget. The obvious mechanism to encourage cost-saving efforts is to distribute a percentage of budget savings to workers. **Gain sharing** differs from profit sharing in that workers receive a percentage of cost savings. For example, 75% of cost savings will be distributed to workers whereas in profit sharing, employees receive a percentage of any profit earned. Both systems give employees a stake in the performance of the organization but gain sharing is easier to tie to the performance of employees, i.e., employees know the cost of producing a good or service and have the ability to reduce costs. In profit sharing, total profit depends on factors beyond employees' control like the demand for the product, performance of management, and the performance of other departments. In gain sharing, payments received by employees are viewed as earned through their cost-reducing actions while profit sharing is sometimes seen as an entitlement of employment.

An effective gain-sharing program requires an easy-to-understand gain sharing formula based on reducing department costs, labor cost per output, or the percentage of labor cost to total revenue (in labor-intensive industries). Second, gain sharing should augment wages; it should not create a system where workers must work harder to maintain their current compensation. Gain sharing should provide an incentive for employees to do more. Employees should receive their base salary and additional pay based on a percentage of their salary, a flat payment-per-worker fee, or a payment per hour, when output increases or cost-per-unit decreases. Employees should be involved in setting up the plan including determining performance targets and the compensation to be earned for meeting and exceeding targets. Fourth, the product mix should be stable as changes in the output mix may obscure gains achieved, i.e., a shift to higher-cost products may mask cost savings while increased output of lower-cost products will exaggerate cost savings. A gain-sharing program should identify the current labor cost per output and specify how much of any reduction will be distributed to employees. For example, if the current cost is $20 per output and the cost can be reduced to $18 and employees receive 75% of the gain, $1.50 in additional compensation per output would be distributed to workers and the organization would retain $0.50 for reinvestment or distributed to owners.

Long-term improvement requires that future budgets be reduced as budget savings are introduced but this feature creates at least two problems. First, will managers and employees pursue cost saving improvements for a one-time bonus if

future budgets will be cut? One possible solution is to provide a multiyear declining percentage saving distribution to workers. Second, will managers and employees take undesirable actions to reduce costs that undermine the quality of goods and services? Shared saving programs should monitor other factors such as sales, returns, defects, etc., to ensure shortsighted and undesirable actions are not taken to obtain immediate rewards that jeopardize long-term success.

Incremental budgets should be used in efficient, non–revenue-generating departments when output is measurable and predictable and/or in unalterable programs where funding cannot or will not be cut. These conditions require a stable environment with minimal change in demand, funding, and/or technology or production methods. Incremental budgeting may also be appropriate when managers lack budgeting expertise or information on output.

## Summary

Incremental budgets are the most basic and frequently used type of budgeting; the goal is to keep an existing operation rolling for another year with no major changes in activity. Incremental budgeting focuses managers' attention on the use and cost of inputs. Constructing an incremental budget requires four steps: identify an expenditure base, identify expected changes in input prices, multiply the expenditure base by the inflation factor, and add or subtract resources for known or anticipated changes. Totaling the requests across object codes produces the budget request. Incremental budgets are appropriate for stable environments such as departments operating in areas without major fluctuations in output, production methods, or organizational revenues.

The goal of incremental budgeting is to allocate an efficient amount of resources to complete work; however, in the real world, these budgets often result in overestimation of resource needs and spending all funds allocated. Managers seeking to preserve their funding allocations are often less concerned with what they get for an expenditure than ensuring the flow of future funds. To avoid this dilemma, evaluating the manager's performance should be shifted away from were actual expenditures less than or equal to the budget to can efficiency be increased? Sharing cost savings would encourage managers and employees to identify and reduce overproduction, overprocessing, unnecessary motion and transport, defects, underutilized and idle resources, and excessive inventories.

The main weakness of incremental budgets is they do not require managers to assess why resources are being consumed; an incremental budget is produced by simple math: estimate current spending and increase this amount for expected inflation. An incremental budget provides little insight into whether performance is improving, stable, or deteriorating. Ensuring that resources are used wisely requires shifting management's attention away from total expenses and whether they are above or below budget to the relationship between expenses and output. Is the cost per output increasing, stable, or decreasing and why? Chapter 4: Incorporating Actual Output into the Budget—Flexible Budgeting, will take us further along the road to efficiency by tying budget allocations to output rather than inputs.

# WRAP-UP

## Key Terms and Concepts

| | | |
|---|---|---|
| Annualization | Expenditure Base | Inflation Factor |
| Balance Sheet | Gain Sharing | Producer Price Index (PPI) |
| Budget Calendar | Income Statement | |
| Chart of Accounts | Incremental Budgeting | |

## Discussion Questions

1. Describe the purpose and structure of the chart of accounts.
2. Describe the purpose and structure of the income statement and balance sheet and their interrelationship.
3. Explain the four steps required to construct an incremental budget.
4. Explain how managers can increase the budget.
5. Explain the strengths and weaknesses of incremental budgeting.
6. How is managerial performance assessed in incremental budgeting?

## Problems

1. Recalculate the budget in Figure 2.4 using 2019 year-to-date actual as the expenditure base (rather than the 2019 year-to-date budget), data are available in the Incremental.xlsx file in the Figure 2.4 tab. A) How much did the budget request increase or decrease over the request in Figure 2.4? B) Briefly explain why the budget request increased or decreased.
2. Recalculate the budget in Figure 2.4 using 2018 full year as the expenditure base (rather than the 2019 year-to-date budget). A) How much did the budget request increase or decrease over the request in Figure 2.4? B) Briefly explain why the budget request increased or decreased.
3. Dr. Taylor has been surprised by the operating loss of her practice over the first 8 months of the fiscal year (in an independent practice, all losses reduce the income of the owner, i.e., Dr. Taylor). Dr. Taylor believes improved performance requires better financial planning. The table shows current patient visits, revenues, and expenses. A) Annualize current revenues and expenses to calculate the anticipated profit for the current year. B) Prepare a budget for the next fiscal year based on Dr. Taylor's plan to increase patient visits by 1%; expected reimbursement of $94 per visit; salaries; benefits; medical supplies; and other expenses, which will increase by 4%. Given the terms of her lease, rent will increase by 2%. What will be next year's profit if budget projections are met?

| | Current | Projected | Budget |
|---|---|---|---|
| **Revenue** | $282,624 | _____ | _____ |
| | | | |
| **Expenses** | | | |
| Physician | $120,000 | _____ | _____ |
| Staff salaries | 82,531 | _____ | _____ |
| FICA | 15,494 | _____ | _____ |
| Retirement | 10,127 | _____ | _____ |
| Medical supplies | 25,431 | _____ | _____ |
| Rent | 19,600 | _____ | _____ |
| Other | 11,994 | _____ | _____ |
| Total | $285,176 | _____ | _____ |
| | | | |
| Profit | −$2,552 | _____ | _____ |
| | | | |
| Visits | 3,072 | | |

4. Given the loss expected in Problem 3, Dr. Taylor wants to know how the practice will perform if patient visits can be increased to 4,800 per year, reimbursement remains at $94 per visit, increases in salaries and benefits are reduced to 3% and other expenses to 1%, medical supplies increase by 4% and rent by 2%. If the budget projections are accurate, how much will the practice make or lose next year?

## Reference

Ross, T. K. (2018). *A Comprehensive Guide to Budgeting for Health Care Managers.* Burlington, MA: Jones & Bartlett Learning.