Statistical Budgets And The Importance Of Statistical Analysis In Budget Reporting

To compete effectively, meet its business needs and obligations, and support its financial goals for growth and innovation, every business needs to practice responsible budgeting and forecasting.

Both large and small businesses use different types of budgets to plan, track, and manage their spending, as well as provide clear and logical support when seeking funding.

One type of budgeting in particular—a *statistical budget*—has special importance.

By learning how they work and using them effectively, you can plan to meet your future business needs based on existing budget data and prioritize decisions that will help you remain profitable and competitive in the fiscal year ahead.

What Is a Statistical Budget?

All budgets are designed to accomplish specific tasks. They come in many different flavors: cash budgeting; bottom-up; top-down; flexible; static; etc.

Companies of all sizes use capital budgets to manage cash flow (and cash budgets!), as well as the purchase of fixed assets; on the other side of the coin, operating budgets map out a company's anticipated spend for the cost of doing business and meeting its obligations.

Generally speaking, however, they share a common purpose: estimating future spend required to cover a given expense (a project, a department's operating expenses, raw materials for production, etc.) and providing a spending roadmap for department managers (and project managers, business unit directors, etc.) to follow as closely as possible while still allowing for reasonable budget variance.

To this end, the budgeting process:

- ## Tethers Ambitions to Reality

  Financial resources are limited, and essential to the success of any business. Effective budgeting of all kinds helps companies allocate their resources intelligently to ensure its business needs and ambitions are adequately funded.

- ## Provides Strategic Planning Support

  Comparing budgeted values with actual spend provides reliable benchmarks for both spend management and performance management. Over time, the data generated through budgeting can be used to refine future budgets and help the company get a stronger return on investment (ROI) for every dollar spent.

- ## Helps Management Control Expenses

  The roadmap set by budgeting provides a quick reference across accounting periods and helps managers track the performance of their

department/project/etc., adjusting spend where necessary to meet goals. Budgets can also reveal opportunities to improve cash flow and increase value by demonstrating the value of direct actions (e.g., process optimization, lowered cycle times, etc.) on cost savings or revealing areas operating at higher than expected efficiency that can have some of their budget diverted to other areas.

Flexible budgets, for example, are designed to accommodate varying levels of activity and expense for the coming fiscal year.

They can be drawn up using analysis of existing spend data to estimate the most likely values for a given period, but as their name implies, these budgets "flex" to match current spend requirements; in other words, the financial roadmap provided may have a few detours and shortcuts along the way.

Statistical budgets (also called *static budgets*) are a bit different.

With statistical budgets, financial managers and budget analysts seek to adjust spending to match the budget, rather than adjusting the budget to match actual spend as needed.

This roadmap actively discourages wandering away from the charted path.

Static budgets:

- Use anticipated values calculated before the start of a given financial period (usually a fiscal year).
- Are unaffected by changes in business activity; their figures for revenue and expenses are "set in stone," so to speak.
- Often use planned inflow and outflow figures for each business unit, department, project, etc. to provide valuable data that can be used to directly measure performance in adhering to budgeted figures for cash flow, revenue, and expenses.
- Draw on past budgets to provide estimates for revenue and expense budget amounts. The more data available, and the more consistent a company's revenue and expenses, the more effective a static budget will be in providing valuable insights for decision making and future budget forecasts.

Budget analysts create these budgets using analysis of past performance and spend data to establish estimates for the fiscal year, anticipated market conditions, or a combination thereof. Ideally, these budget analysts will have two years or more of financial statements and existing budgets to refer to when planning the static budget for the month, quarter, or year.

These budgets are not, however, designed to be flexible.

Their value comes from analysis of *budget variance*—i.e., the amount by which actual spending for a budget period differs from the budget amounts allocated.

In examining this variance, it's possible to measure the efficacy of the company's overall financial planning capabilities, as well as those of specific department and project managers.

Chief financial officers (CFOs) rely on static budgets to take corrective action on issues such as seasonality-related cash flow challenges by planning for new sources of short-term funding to meet the shortfall.

Statistical budgets can also, as with a flexible budget, reveal opportunities to increase savings and value through process improvement and additional financial analysis.

Which is extremely valuable, since variance is to be eliminated wherever possible.

For example, if the company's marketing department has a budget of $150,000 for a specific promotion, managers will be expected to stick to that figure regardless of actual costs incurred—and be ready to explain any variations that occur.

That's why the statistical analysis component of a statistical budget is where the value will be found for most businesses.

By tracking and analyzing the financial data generated by statistical budgets, both regular and senior management can improve spend management, financial analysis and planning, and overall operational and competitive strength.

> *Diving deep into variance analysis can get quite complex even for experienced budget analysts, involving linear regression and advanced qualitative vs quantitative budget methodologies—but at its most basic, variance reporting is*

a direct comparison of actual spend vs. forecasted spend.

Statistical Analysis in Budget Reporting

Unlike a flexible budget, where future iterations are adjusted to match changes in actual spend, a statistical budget seeks to reduce budget variance in both the current *and* future iterations to ensure spend adheres to the budget roadmap as closely as possible.

To accomplish this, many companies rely on statistical analysis—specifically, *variance analysis*.

The purpose of such analysis is to reveal the reasons actual spend deviated from projected values, and what corrective actions are required to bring them back in line to avoid problems with future cash flow, strategic planning, etc.

Let's take a closer look at an example of variance analysis in action.

1. Variance Reporting

For many businesses static budgets (and analyses thereof) are of critical importance to two specific areas of financial management:

1. Production and Operations (Direct and Indirect Costs)
2. Sales Revenue and Costs

In cost accounting, accurate and complete variance analysis for these budget items can be intricate and difficult.

Technically speaking, any deviation at all from budgeted values constitutes a variance.

However, many companies establish different levels of urgency related to budget variance; a budget item running 1.2% over budget is a problem, but not quite the crisis that one running 22% over budget might be.

Diving deep into variance analysis can get quite complex even for experienced budget analysts, involving linear regression and advanced qualitative vs quantitative budget methodologies—but at its most basic, variance reporting is a

direct comparison of actual spend vs. forecasted spend.

Consider this example, based on Company X's quarterly budget for production overhead:

COMPANY X				
Quarterly Budget: Production Overhead Costs				
ITEM	**Q1 Forecasted**	**Q1 Actual**	**Variance**	**Variance %**
Indirect Labor				
Salaries (fixed)	$1,000,000	$1,050,000	$50,000	5.0%
Wages (variable)	$7,000,000	$7,250,000	$250,000	3.6%
Infrastructure				
Rent (fixed)	$150,000	$150,000	$0	0.0%
Insurance (fixed)	$120,000	$135,000	$15,000	12.5%
Maintenance (variable)	$2,500,000	$2,575,000	$75,000	3.0%
Utilities (variable)	$100,000	$118,000	$18,000	18.0%
TOTAL:	$10,870,000	$11,278,000	$408,000	3.8%

Looking at the totals, it's likely senior management will want to know:

- Why utilities variance is so high at 18%.
- Where the deviations in wages and salaries originate.
- Whether Q1 income increased sufficiently to compensate for these budget variances.

2. Identifying Variances Related to Specific Cost

Items

In our example, the cost item in question is “production overhead.” We now turn our attention to the budget line items that make up this category.

Ideally, fixed costs are stable and unrelated to production volume, and therefore more predictable than variable costs, which *are* tied to production volume.

However, as we see in the chart, two fixed costs—salaries and insurance—exceeded the forecasted values. It’s up to the budget analysts to uncover the potential reasons for these variances.

3. Causes of Fixed Cost Variances

Investigation into the unexpected variances in fixed costs will in most cases uncover explanations for each issue.

In our example, the budget analysts discovered insurance premiums underwent an unexpected hike due to the COVID-19 crisis; in addition, a senior manager was out for two weeks, with pay, due to self-isolating after COVID-19 exposure.

Generally, budget variances for fixed costs are caused by emergencies, unanticipated cost increases, or inaccuracies in the estimated need for a given resource.

4. Causes of Variable Cost Variances

The variances created by fixed costs in Company X’s production budget are minimal.

However, one area of variable cost—utilities—is significantly out of plumb with its forecasted amount at 15.3%. Since utility usage is tied directly to production, in order to find the exact actual additional cost, we need to do a few more calculations.

Utility costs are affected by two other items: the number of units produced, and the utility usage per hour.

So:

Units Manufactured x Time to Produce Each Unit x Utility Cost Per Hour = Total Utility Cost

Breaking that down in a very simple way, we get something like this:

COMPANY X				
Utility Costs (Production Overhead)				
ITEM	**Q1 Forecasted**	**Q1 Actual**	**Variance**	**Variance %**
Units Produced	1,000	1,100	100	10%
Production Time Per Unit (Hours)	.25	.2	-.05	-2%
Utility Cost Per Hour	$40	$53.64	$13.64	34%
Utility Cost:	$100,000	$118,000	$18,000	18%

We get the actual utilities cost by adding 100% to each figure:

- Unit variance is 110% of the forecasted value.
- Production Time Variance is 98% of the forecasted value.
- Utility Cost Per Hour is 134% of the forecasted value.

Multiplying these values together provides us with the actual utility cost:
Forecasted Utility Cost x 110% x 98% x 134% = Actual Utility Cost (AUC)

$100,000 x 110% x 98% x 134% = $144,452.00

5. Analysis Conclusions

Based on our analysis of the production overhead budget, our hypothetical budget analysts can now draw some conclusions they can use to improve future budgets and overall financial planning and management.

1. Despite higher utility costs being a variance, the corresponding increase in unit production at a faster per-unit rate is a net positive.
2. The increase to next quarter’s forecasted production needs may inspire

senior management to add new hires to further improve production without increasing labor costs created by excessive overtime.
3. The improvements to production efficiency are a good starting point for further process optimization to increase value and trim total costs.

In our example, we lumped utilities together into a single value, but in a real world scenario, budget analysts would likely apply the same formula to every utility used (e.g., water, gas, electricity, etc.) on an individual basis to provide a more granulated view of the utility costs and isolate specific opportunities to reduce usage and improve variance without impacting productivity.

Note: Implementing a comprehensive spend management software solution like PLANERGY, with powerful budgeting, reporting, analysis and forecasting tools, simplifies all your budgeting in numerous ways.

With complete spend transparency, full-time, level-appropriate access to all spend data for all stakeholders, and customizable dashboards for analysis and reporting, your CFO, senior management, and budget specialists can work together to create budgets, track them over time, and quickly isolate areas in need of corrective action.

Full integration with your existing software environment means better budgets over time, and tighter controls on spending through improved internal controls, process automation, and continuous improvement across all workflows.

Plan, Track, and Analyze for Statistical Budget Success

Charting your course for spending and sticking to it can help your company maintain the working capital, strong credit, and competitive strength it needs to grow, innovate, and boost its bottom line.

By making smart use of statistical budgets and financial data analysis, you can ensure your budget process is a reliable and consistent source of valuable savings, actionable insights, and more effective strategic decision making.

What’s your goal today?

1. Use PLANERGY to manage purchasing and accounts payable

We’ve helped save billions of dollars for our clients through better spend management, process automation in purchasing and finance, and reducing financial risks. To discover how we can help grow your business:

- Read our case studies, client success stories, and testimonials.
- Visit our “Solutions” page to see the areas of your business we can help improve to see if we’re a good fit for each other.
- Learn about us, and our long history of helping companies just like yours.

Book a Live Demo

2. Download our guide “Preparing Your AP Department For The Future”

Download a free copy of our guide to future proofing your accounts payable department. You’ll also be subscribed to our email newsletter and notified about new articles or if have something interesting to share.

download a free copy of our guide

3. Learn best practices for purchasing, finance, and more

Browse hundreds of articles, containing an amazing number of useful tools, techniques, and best practices. Many readers tell us they would have paid consultants for the advice in these articles.

Related Posts