CAP Project

MODULE 4 VIDEO 6.1 ADJUSTMENTS AND SENSITIVITY ANALYSIS IN A COST ANALYSIS TEMPLATE: INFLATION

Hello and welcome to Module 4 Video 6 where, in four sections, 6.1 through 6.4, I'll be showing you how one of our cost analysis templates, CAPCAT 1.2 Plus, makes adjustments to prices and costs for you. I'll also show you more complex geographical adjustments in CAPCAT 1.3 Advanced. I'll describe the data points, calculations, and formulas used so you know exactly what's going on behind the scenes. I'll also show you where you can change data entries to facilitate sensitivity analysis in which you test how much your results change if you alter key assumptions, especially those about which there is some uncertainty.

As a reminder, the adjustments you may need to make include:

- Inflation adjustments to prices so they are all standardized to the same year;
- Amortization, or spreading the costs of items that last more than one year over their useful lifetimes;
- Compounding or discounting costs that occur before or after the base year you have chosen for your analysis, which is often the first year of program implementation; and
- Geographical adjustments to prices so they are all standardized to price levels in the same location.

The good news is that, if you completed the Setup tab in CAPCAT, which we showed you how to do in Module 2 Video 6, and entered all the data points we talked about in Module 3 in the Ingredients tabs, CAPCAT will have made all these adjustments for you already. But you need to be able to assess whether the output makes sense, and you may want to change some of the inputs to better suit your context.

This section of the video focuses on how CAPCAT helps you execute inflation adjustments.

To demonstrate these adjustments, I'll use the Reading Recovery Teacher Leader, which is a key personnel ingredient for implementing Reading Recovery.

As you can see here, I have 2 rows of data on the Teacher Leader in the Personnel tab because she spent time participating in 2 different components of the program: training and program delivery. I want to be able to report costs by program component and I also want to report startup costs like training separately from ongoing costs. Having one row for each of the Teacher Leader's main activities allows me to produce a more granular analysis of costs.

So, let's take a look at how CAPCAT adjusts prices for inflation. You may remember from Module 2 Video 6 when we were setting up the Reading Recovery vs. Fast ForWord Reading cost-effectiveness analysis, that, in the Program Information table in the Setup tab, we indicated that the year in which we wanted to present costs is 2017. This means that CAPCAT will need to adjust any price we use that *isn't* from 2017 for inflation.

In the Personnel tab, we listed the Reading Recovery teacher as having a local average salary of $77,799 in 2017.

You can see that CAPCAT has correctly made no adjustment to this in the column labeled "Local salary inflation-adjusted".

However, the national average salary we used of $68,478 was from the year 2015 so CAPCAT used the inflation indices that are listed in the Rates tab to adjust this price to 2017 levels.

The 2015 index is 236.525 and the 2017 index is about 10 points higher at 246.524, so we should expect that adjusting for inflation will give us a higher salary for the Teacher Leader.

If you want to use different inflation indices instead of CPI-U, you can simply replace the relevant numbers for each year in the column highlighted with the red box and CAPCAT will use your numbers instead.

If you need to project costs into the future because the program you are considering is being implemented at a later date, that is, you are conducting a prospective cost analysis, you can keep adding years and entering estimated future inflation indices here.

And you'll also need to add estimated future interest rates here.

To add more years, click on the bottom right corner of each table, hold and drag the cursor down as many rows as you need.

So, what is CAPCAT actually doing with those inflation indices? It multiplies the listed price by the index for the year in which we want to estimate costs, that's 2017, divided by the index for the year of the listed price which was 2015. The resulting salary of $71,373 is what you'll find CAPCAT has calculated for you in the column "National salary inflation-adjusted." As we anticipated, this value is higher than the original price because the inflation rate was positive between 2015 and 2017.

That's it for inflation. Check out the next 3 sections for amortization, discounting or compounding, and geographical adjustments.