



Free Training

Transcript: Modifying Table Calculations

Welcome to this Modifying Table Calculations video. You can download the Exercise workbook to follow along in your own copy of Tableau.

Here, we have the running total of profits by month. Let's ask a new question: at the level of monthly profits, has technology had the highest running total of profits each year? To answer this, we need to modify the view and the Table Calculation. We'll add Discrete Year to columns. And bring Category to Color.

But hmmm, this is a combined running total from 2012 to 2015. I want it to be a unique running total per year. Because of the question we're asking, we have to modify the way the table calculation is being computed.

Computing Using

Right click the pill, and select Compute Using. Here are several options for the scope and direction of how the calculation should be computed. But to see better what these options mean, let's instead choose to Edit the Table Calculation. Now, as we click through the options, we can see what changes. Tableau has defaulted to have the calculation run along Table (Across), meaning we see the Running Total of Profit across all 4 years.

But we want to know if technology had the highest running total each year, so we want to look at each year independently. Changing the scope from Table to Pane gives us this calculation, computing the Running Total for each Pane, or Year. And it looks like Technology did have the highest Running Total of Profit each year. We saw that Table (Across) and Pane (Across) provided different interpretations of the Field Set by using a different scope. For our data, the direction (across, down, etc) doesn't matter as this is a fairly simple arrangement.

A great way to see the distinction between combinations of different Scopes and Directions is to use the Percent of Total calc on a crosstab of numbers. Here, on the Scope and Direction dashboard, the subtotals for each combination of Direction and Scope are slightly different and allow for different questions to be answered. You may want to pause this video and explore the dashboard, as we won't go over it.

Referencing Specific Dimensions

If altering the scope and direction of the Table Calc doesn't give the results we're looking for, we have even more control of how the calculation is computed by referencing specific dimensions. All dimensions in the view will be used in a table calculation either for

partitioning or addressing. Partitioning fields scope the data. They define the groups of data the table calculation is performed on – like using Pane to partition our data by Year earlier. Addressing fields are any dimensions not used in partitioning, and they determine the direction of the calculation. The order of addressing fields also matters.

Here we have the Percent of Total Sales broken down by Category and Sub-Category. To see which fields have been categorized as addressing or partitioning, we can Edit the Table Calculation. We see the scope and direction is Table down, and the partitioning and addressing fields are automatically determined by this selection. However, if we want to change these ourselves, we simply select Specific Dimensions.

In this list box, we see that both Category and Sub-Category are checked. Anything checked is addressing the data. Let's uncheck both, making them partitioning fields. Now every percent of total is 100, because the calculation is running on the partition of sub-category and category, so each is 100% of itself. If we only check Sub-Category, we are now partitioned by Category and addressed by Sub-Category, and we see the breakdown within each category as a distinct unit. We can see, for example, that Phones make up almost 36% of the sales in Technology.

If we check both Category and Sub-Category, making them both addressing fields, we're back to being table scoped (with no partition) and we see that phones are only 13.5% of the overall total across all categories.

In this example, it doesn't matter if Category or Sub-Category is on top in the list box, but the order can matter as it controls the order in which the calculation is run. We can drag fields to change the order. Check out the Online Help for more information.

Because table calculations can be set to calculate at odds with the visual arrangement of the data, or in a view that's not as immediately understandable as a crosstab, it's important to understand what's going on when you select a Compute Using option or determine addressing and partitioning fields with Specific Dimensions. Check out the resources under the video to learn more.

Conclusion

Thank you for watching this Modifying Table Calculations training video. We invite you to continue with the free Training videos to learn more about using Tableau.