



How To Weight Stacked Data

Problem

The data has been “stacked”, with a single respondent’s data appearing on multiple lines. Most commonly, this is because the respondent has provided data about multiple occasions (where each occasion is in a separate line) or about all the members of their household (where each household member is in a separate line). Stacking the data has the consequence of inflating the sample size (e.g., 100 respondents with 10 rows of data will appear to Q as 1,000 respondents), which causes things to appear significant that may not be *statistically significant*. By using a weight, this adverse effect will be partially ameliorated

Steps to solve

If your data is unweighted:

1. Have your fieldwork company set up your stacked data file containing a variable called `nObs`, which shows for each row in the data file the number of rows provided by each respondent, for example:

Respondent ID	nObs
1	3
1	3
1	3
2	2
2	2
3	1
4	2
4	2

2. In the **Variables and Questions** tab, right-click anywhere and select **Insert Variable(s)** and **JavaScript Formula** and **Numeric....**
3. Fill out the dialog box as follows:
 - a. **Name:** `stackWeight`
 - b. **Label:** `Weight - stacked`
 - c. **Expression:** `1/nObs`
4. Press **OK**.
5. Click on the pale yellow **w** (so it looks like **w**), making the new variable available as a weight.
6. In the **Tables** tab, apply the weight: **Weight – stacked**. While the n at the bottom of the screen will still be as for the unweighted data, you can see the effect of the weighting by selecting **Base Population** in **Statistics – Cells**.
7. In the **Analysis** menu, select **Statistical Assumptions....**
8. Set the **Sample scaling constant** to 1.
9. Press **OK**.

If your data is weighted:

Follow the same steps as above, except:

- Make sure that your weight has an average of 1.0.
- Find a table where there is no missing data and take a note of the *effective sample size* when the weight is applied (shown at the bottom of the screen).
- In Step 3.c, replace 1 with the name of your weight.
- In Step 8, set the **Sample scaling constant** to your study's *effective sample size*.

Additional reading

Terms shown in italics and bold can be found in the index of the *Q Reference Manual*, the *Quick Start Manual* and via the **Help** menu within Q.

What to do if the problem is not solved

If these instructions are insufficient, please email us (**Help | Email Support...**) with a detailed description of what in the instructions is not working for you and we will either provide you with more comprehensive instructions, or, upon your request, we can do the analysis for you in your file (fees apply) .