Subject: Re: Question re-weighting combined survey data Posted by Reduced-For(u)m on Sat, 30 Mar 2013 04:34:28 GMT View Forum Message <> Reply to Message

Bridgette,

Wow. This is actually kind of scary to me. From that one-pager:

For example, to de-normalize the household standard weight HV005, one should divide the household standard weight by the household survey sampling fraction, that is, the ratio of total number of households interviewed in the survey over the total number of residential households in the country at the time of the survey....The second piece of information is usually obtained from population projections for a period close to the time of the survey fieldwork, based on the latest population census. The de- normalized weight is very sensitive to the second piece of information, so one should guarantee that the source of information is reliable; otherwise, it can lead to erroneous statistical conclusions.

That is actually sort of scary, right? Has anyone ever tried to figure out whether anything at all is gained from trying to re-normalize these? Supposing we appended 10 country survey rounds together and we didn't do any weighting at all...then we would have a mean that was biased toward the over-sampled populations and ignored the population-size differences between the countries, but which is interpretable as the mean of that particular sample. But if we grab some estimate of the total number of households (or people) in a country and that estimate is, say, 5-10% off (which strikes me as a conservative guess at how well we know how many households are in a country), then are we really getting anything approaching the population mean, or are we possibly getting a worse estimate that is totally uninterpretable?

I've generally sided with weighting over not-weighting, but I might be tempted to re-think that in situations where we are using pooled data. Alternatively, anyone have an interpretation of what we are estimating if we just use the regular weights after appending 10 countries together? Is that like weighting within country but ignoring population differences across countries (the implicit population weight being the sample size)?

One last thing: If we append together multiple rounds of the same survey, do we still need to re-normalize, and what are we estimating if we don't relative to if we do - meaning what are we implicitly assuming about the sample sizes and population growth over time? Sorry if this is asking too much, but if anyone has any insight on this, I'd love to hear it. Weighting in these ways is kind of hard to think about.