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Subject: Thoughts on pooling surveys from single country

Posted by [dflood011](#) on Fri, 24 Nov 2017 14:57:52 GMT

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Hi, I'm conducting an analysis of stunting risk factors in a single country with multiple recent DHS surveys. I'm trying to decide whether to pool surveys, which is a practice I've encountered in similar analyses. (See below for examples.) I'm not as interesting in assessing changes over time for my particular analysis.

What do the analysts/experts here think of this practice?

The advantages I see:

- large sample permits more covariates, more complex models
- ?

Disadvantages

- not an elegant cross-sectional assessment
- covariates may not be the same across years
- recalculating some metrics, such as wealth, made more difficult
- - additional complexity in survey weighting

<https://www.ncbi.nlm.nih.gov/pubmed/23678197>

<https://www.ncbi.nlm.nih.gov/pubmed/27161654>

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Subject: Re: Thoughts on pooling surveys from single country

Posted by [Reduced-For\(u\)m](#) on Sat, 25 Nov 2017 19:41:10 GMT

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David,

Don't have too much to add to your post, it sounds to me like you have a pretty good handle on the issues related to pooling: trading off power (N) for bias/interpretability (changes over time in outcomes and variable measurement, plus the weighting issues). A couple quick thoughts:

1 - the weighting problem is much less severe within-country...sample sizes are often similar, weighting each survey equally makes sense (divid each weight by the within-round-sum-of-weights so each survey sums to 1), and you lose the whole "population representative" issue where South Africa and Nigeria basically dominate all regressions.

2 - The covariate comparability problem is smaller since a) standardization within countries is really strong; b) wealth might be more easily comparable across time, especially if you use the new comparable wealth index DHS created; and c) a wood roof in Tanzania probably means the same thing across a couple of years/decades...but maybe not across continents.

3 - As usual, it depends on what you want to do. If power is a big problem (why?), then there is little danger in pooling multiple rounds from the same country (little that isn't dangerous using just one survey, and supposing the effect of interest is relatively constant across time). If power isn't a

problem - just do it separately within each survey and use a "seemingly unrelated regressions" type of test to see if the coefficient is changing across surveys.

But in general, it just sounded like you understood the trade-offs well and just had a decision to make. Hope this helps at least a little bit.

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