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Subject: Re: Accounting for different sampling areas over different years

Posted by [Reduced-For\(u\)m](#) on Thu, 16 Apr 2015 20:05:41 GMT

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My intuition is that you would want to use different strata too - the idea being that the stratification was done separately by survey round, even if they overlap - but I think this is probably, if not an open question in the survey analysis literature, at least sufficiently esoteric that there is no agreed-upon course of action. That said, I do have two points I'm more sure about:

1 - you say "If we treat strata codes different across the surveys, the variance estimation is not only affected but also the degrees of freedom, confidence intervals, and p-value calculations." But variance estimation will always affect CIs and P-values, and the effect of the loss of DF should not affect critical values, given the large number.

2 - depending on your variables of interest and how those are constructed, you might want to use a standard error estimator that accounts for more robust correlations than those you would use if you were just looking at a single, individual-level covariate from one survey. Error terms are likely correlated across time within region (worse if you are using aggregated or constructed variables on the right hand side of your regression) and the standard DHS method won't account for this, but clustering by spatial region across survey rounds would.

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