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Subject: Re: Using community-level variables in regression models

Posted by [Reduced-For\(u\)m](#) on Thu, 16 Jul 2015 21:31:11 GMT

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It seems like investigating the determinants of neonatal mortality in Nigeria has been a popular thing to do lately. Some comments on your analysis plan:

1) Continuous/Categorical: this is up to you. In general, I don't think there is much to gain from turning a perfectly good continuous variable into a categorical one, but that is just my opinion. If you decide to go categorical, you should probably use no more than a few categories, otherwise you are likely to lose a lot of power. Plus, at the cluster level, there will be a lot of noise in your community estimates, and categorizing them across lots of bins is probably not helpful, because the more bins you have the more likely any given cluster is placed in the wrong bin.

2) You need to use the "svy" prefix for two reasons: in part to get the proper weights so that over-sampled populations aren't overly influential in your regressions, but more than that (in this context) to get standard error estimates that are appropriate (without accounting for the clustering, your standard errors and p-values will be too small).

3) You usually can't directly interpret the results from a logistic regression on either a continuous OR categorical variable without transforming them in some way. You need to turn them into something like marginal effects or relative risk ratios or something like that. I like marginal effects, but that is a preference and not universal. Stata can do this if you use the mfx command\* or some other options. If you don't know how to interpret these, you will need to do some background reading. If you are getting coefficients in the tens of thousands range, you are likely either mis-specifying something or looking at a coefficient that still needs to be transformed in some way to be interpretable.

\*<http://www.stata.com/support/faqs/statistics/marginal-effects-methods/>

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