Subject: Re: How do I account for clustering within families?
Posted by user-rhs on Sat, 12 Apr 2014 13:41:00 GMT
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Dear Vega,
If you are so inclined, you can run a mixed model where household is nested within sampling cluster. Depending on what your outcome is, you can try -xtmixed- for multilevel mixed effects linear regression or -xtmelogit- for multilevel mixed effects logistic regression. For other outcomes, use -gllamm-, which I should warn is a beast* to run, and will probably take at least half a day to complete the procedure (and sometimes, after 3 days of running, you still don't get convergence.....the point is, do NOT run -gllamm- if you're pressed for time). As I do not have Stata 13, I can't tell you whether there is a less clunky procedure that is equivalent to -gllamm- built into Stata 13. (Reduced-for(u)m, if you have Stata 13, does such a procedure exist?)

Sample syntax
xtmixed outcome covariate1 covariate2 || cluster: || hhid:

If you suspect that having random slopes makes sense for some variables you can list the variables for which you want random slopes estimated after the colons, e.g.
xtmixed outcome covariate1 covariate2 || cluster: covariate3 || hhid:

****Note, this is usually an exception rather than norm and controlling for clustering via the cluster and household fixed effects is sufficient for most purposes.

For more information, visit the documentation for -xtmixed-, -xtmelogit-, -gllamm-, and the Bristol University Centre for Multilevel Modelling:
- http://www.stata.com/help.cgi?xtmixed
- http://www.stata.com/help.cgi?xtmelogit
- http://www.gllamm.org/
- http://www.bristol.ac.uk/cmm/learning/online-course/index.ht ml

HTH,
RHS

*I have only the utmost respect for Prof. Sophia Rabe-Hesketh who wrote -gllamm- (and is co-author of the Stata Press books on multilevel modeling). GLLAMM is very flexible and powerful but takes a long time to run. The flexibility also means you have to read the documentation properly to make sure you won't get error warnings for failing to specify required "options" for the specific model you are trying to fit!