Subject: Multilevel modelling
Posted by denis on Sun, 24 Sep 2017 15:10:46 GMT
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Dear DHS team, i am using pooled DHS data from 21 countries. I am doing a multilevel analysis with individuals at the first level and countries at the second level. (Initially, i wanted to do the modelling at 3 levels namely; individual, cluster (PSU) and country level, however, the average number of women per cluster was 19 and the median was 18 which i felt was too small to derive cluster level aggregrates.
My questions are as follow;

(1) Can i do the modelling at 2 levels (individual and countries) since my average cluster size is small or is the cluster size appropriate (average of 19 women per cluster)?

(2) I intend to use some world bank development indicators in my model as country level factors such as GDP per capita, PPP, however, some DHS survey span over 2 years for example Rwanda DHS was done in the year 2014-2015, Congo DR 2013-2014. For these countries which year is appropriate when selecting for instance GDP.

Thanks

Subject: Re: Multilevel modelling
Posted by Bridgette-DHS on Tue, 26 Sep 2017 14:49:13 GMT
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Following is a response from Senior DHS Stata Specialist, Tom Pullum:

Yes, you could do a 3-level model. Normally, when using a single survey, we recommend a two-level model with individuals and clusters. There is a limitation, however, that we cannot divide the sampling fraction into separate terms for the selection of clusters and the selection of individuals within clusters.

I recommend that you calculate the mean date of interview using v006 and v007 (or v008). (It would be sufficient to use month and year of interview, but day is available too if you want to include it.) For most external data sets, July 1 of the calendar year is the reference date. I would select the year for which July 1 is closest to the mean date of interview. But if you are using something like a fertility rate for the 3 years before the survey, the midpoint of that reference time interval (which would be 1.5 years before the mean date of interview) would be the appropriate date for matching with other data.

Subject: Re: Multilevel modelling

Posted by denis on Wed, 27 Sep 2017 06:29:34 GMT
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Dear DHS team

Thank you very much for your prompt response

Kind regards.