Subject: Sample design, linear models and multilevel analysis
Posted by candres on Tue, 19 May 2015 16:48:20 GMT
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Dear panelist,

I apologize because of the length of my questions and appreciate the time and your attention.

1) In fitting linear models with the DHS one faces three options: (1) use all the information about the sample design (clusters, strata, etc), (2) use only the weights, (3) assume a SRS and not use neither the design nor the weights. Could you please tell us about the implications (assumptions) behind each of the three options and how to decide among them.

2) How to properly define and use the sample design when one wants to combine three different waves and produce a combined estimation? Should the sample design be used or not? Only the weights? Any adjustment is needed? or the waves should not be combined? My question is related to both cases. When one is interested in making descriptive estimations (mean, proportions, etc) and in the context of a linear model.

3) Could you please elaborate a bit on the reasons to include the births in the last 36 months in the calculation of the Total Fertility Rate for the year of the survey?

4) In a Linear model that uses the DHS (Y=births in the last 36 months), does it make sense to incorporate a fixed effect based on a geographical area (county, state, municipality, subregion) for which the survey is not representative? more specifically, the Colombian DHS is not representative for municipalities, does it make sense a municipal fixed effect?

5) I linked the DHS with a external classification of the Colombian municipalities (the smallest administrative area of the country). The classification divides the municipalities in two groups. Is there any way to test the extent to which the survey is giving reliable estimations for the groups? it is neccessary to modify the specification of the sample design? or this kind of analysis are beyond the scope of the DHS?