
Subject: Using weight in Econometric model using DHS data
Posted by wangsonne@merit.unu.edu on Thu, 28 May 2015 14:32:06 GMT
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Hi ,
I was wondering whether it is compulsory to take in account sampling weight in all regressions runned using DHS data. If not, When is it then necessary to use weights?
With best regards

Subject: Re: Using weight in Econometric model using DHS data
Posted by [user-rhs](#) on Wed, 03 Jun 2015 20:08:37 GMT
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It depends on what you are trying to accomplish. If you're trying to make inference to the sample, then it's not necessary to weight. However, if you are trying to make inference to the population from which the sample was drawn, then in general it is necessary to weight your estimates using the "population weight" or "sampling weight" option in your statistical package.

Think about the logic behind weighting. When we do not weight our estimates, we assumed that the data were collected using simple random sampling. That is, we assume that everyone had an equal probability of being selected into the survey. We know this is not the case in nationally-representative samples. Often, logistics and operational costs will force us to use some kind of non-SRS design for our survey. The DHS generally employs a (stratified) two-stage cluster sampling design. Sometimes some areas are oversampled in order to ensure adequate sample size for estimation. Failing to weight the estimates would result in an over-representation of oversampled areas relative to the country as a whole, so your unweighted estimates for that country would be biased. In simplistic terms, weighting will restore the "population representation" of your sample.

It is not sufficient only to weight your estimates. You need to correct also for the sampling design so you get correct standard errors. Weighting only corrects the point estimates, as I mentioned above. You need to take into account the clusters and strata to get the correct standard errors for your point estimates.

Of course, nothing in life (and statistics) is as simple as a "Yes" or "No" answer. For an enlightening and technical discussion around weighting, I invite you to read Solon, Haider, and Wooldridge's recent (2015) paper "What are we weighting for?" Reference to follow.

HTH,
RHS

Reference:

Solon, G., Haider, S. J., & Wooldridge, J. M. (2015). What are we weighting for? The Journal of Human Resources, 50(2), 301316. <http://doi.org/10.3368/jhr.50.2.301> (Working paper version here if you cannot access the journal article:

http://econ.tulane.edu/seminars/Solon_Weighting.pdf)
