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Subject: Interrupted time series analysis using DHS data and applying sample weights

Posted by [mm23](#) on Wed, 08 Feb 2017 14:47:38 GMT

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I am currently using the Zambia DHS to do an interrupted time series analysis of a policy that was implemented in Zambia between 1996 and 2006. Am mainly interested in 3 indicators

1. proportion of facility deliveries
2. proportion of children fully immunized
3. proportion of women receiving antenatal services

I am using all the data from all the five rounds of DHS in Zambia

The general method I used to calculate the proportion (using the example of proportion of facility deliveries) is:

total number of children born in a health facility in the last five years preceding the survey /total number of children born in the last five years preceding the survey

I aggregated the births by quarter and used the .itsa command in stata to run the analysis. However, when I presented these finding, I was told that I should have applied the sampling weights.

I have been searching online on how I can apply the weights in an ITSA, but I have not found any information.

Looking at what am trying to do, is it necessary for me to apply the weights? And if I do need to apply the weights, how am I supposed to do it in light of the analysis am trying to run?

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Subject: Re: Interrupted time series analysis using DHS data and applying sample weights

Posted by [Bridgette-DHS](#) on Wed, 08 Feb 2017 19:26:16 GMT

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Following is a response from Senior DHS Specialist, Tom Pullum:

I suppose your quarterly measurement will work but you must limit it to births in the DHS survey for which the information was obtained. For example, sometimes an outcome is measured only for the most recent birth in the past five years, and otherwise the outcome has the NA code ("."). In that case, just the births that are not NA would be in the denominator.

Yes, you should always use the weights, v005. However, some procedures do not allow weights, at least not in the current version. In that case you omit the weights (you have no choice!). I am not familiar with the "itsa" command in Stata. You could go to the Stata forum for help with that. Or maybe another user of the DHS forum can help.

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