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Subject: Trend analysis of dichotomous categorical outcome variable on stata  
Posted by [signori](#) on Mon, 11 Jan 2016 14:54:25 GMT

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Happy new year!!!

I am relatively new to this forum and also a relative novice with regards to data analysis and only familiar with spss, but the analysis I intend to run is not available there, so I have decided to switch to stata.

I am currently working on a dissertation on trend analysis of undernutrition in Nigeria over a 10 year period using ndhs datasets. Having prepared my data for analysis, I am a bit stuck with regards on how to proceed with both a chi square and a logistic regression for trend on the complex survey module of stata. My outcome variable is categorical binary while the survey years (independent variable) are categorical and ordinal having 3 categories. I would be very grateful for any useful guidance offered.

Thank you.

Ikenna Onoh.

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Subject: Re: Trend analysis of dichotomous categorical outcome variable on stata  
Posted by [Reduced-For\(u\)m](#) on Mon, 11 Jan 2016 20:22:57 GMT

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I'm not sure exactly what you have in mind - but in this setup, to me, you have essentially 3 "observations" at the country level from which to do your "trend analysis". That is, you have 3 nationally representative stunting rates (or wasting, or whichever categorical variable you are using).

Why not just estimate the means of each survey and then test whether the means are equal (and graph them out to literally see the trend)? One way would be to use the standard OLS regression on each dataset separately (using the "svy" prefix and the "regress" command) and then to use the "seemingly unrelated regressions" (google "stata help suest") to test the equality of means (so, just the constant without any covariates included in the original regression). Mean here being proportion stunted/wasted.

Or you could put all the individual observations in one regression model with dummy variables for each survey round and use a standard F-test (using the "svy" prefix before the regression and the "test" command after). You'd have to carefully re-define your strata and PSU for each round.

But maybe you have something more complex in mind? Remember, that since these are, as a whole, nationally representative datasets, you aren't, at the national level, ever really getting much more information than you get from the 3 mean stunting/wasting rates, although maybe if the covariates are changing over time you might learn a little bit more (but that is part of the "trend" itself in my opinion, since nutritional status doesn't just change on its own, it changes because the country is changing in some way).

So I'm not sure this helps, but if you have a more specific question of what you mean by "trend

analysis" I could maybe help a little more.

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Subject: Re: Trend analysis of dichotomous categorical outcome variable on stata  
Posted by [signori](#) on Mon, 11 Jan 2016 22:12:39 GMT

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Thanks for that prompt response. My intention is to establish the presence of linear trends in the undernutrition rates at the national level across the 3 survey years. I also intend to do same across various values of different child, maternal and household characteristics, like gender, child age groups, maternal education etc. I need an appropriate test of the presence of trend. Is the np trend under non-parametric tests appropriate considering that it is not supported by the survey design. The F test you spoke about, is it the hypothesis test for model fit? And the logistic model you propose would have the survey year as the only independent variables?  
Thank you.

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Subject: Re: Trend analysis of dichotomous categorical outcome variable on stata  
Posted by [signori](#) on Mon, 11 Jan 2016 22:56:16 GMT

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Please can you paste the syntax for the survey regression you spoke about or describe how to use the drop-down menu to execute it. Thank you.

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