
Subject: Comparing variables across different years
Posted by [UAB_user](#) on Tue, 07 Apr 2015 20:18:35 GMT
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Hello,

For my project I am looking at a husband's migration across the 2006 and 2011 Nepal DHS. Is it possible to compare variables across years and test if they are significantly different? I know the PSUs and study design differ between years, so I am assuming that its not correct to do something as simple as conduct a Chi-Sq in a 2x2 tables of Year and another variable (example: Year x Sex).

How do you test if variables differ across years in a univariate analysis?

Thank you very much
Derek

Subject: Re: Comparing variables across different years
Posted by [Reduced-For\(u\)m](#) on Tue, 07 Apr 2015 22:38:58 GMT
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One way to think about it: you could pool the datasets (append them together) and regress on a constant and a dummy variable for "surveyed in 2011". The coefficient on the survey year dummy is the difference between the two means and you could do a t-test of the coefficient equals 0 (you could also run the regression with no constant and just a dummy for each survey year and those would give you the means of the two survey years, and then you can test the equality of the coefficients with an F-test). That would let you use account for survey design in both years (provided you fixed your PSUs to be survey-specific and de-normalized your weights appropriately, though the re-normalizing may be less important for two surveys from the same country if they are similarly sized samples and similar designs).

You could do this separately for men/women, or you could make a dummy for each group (genderXyear) and put them all in one regression and then test the coefficients of interest with post estimation commands (you would use "test" in Stata).

Subject: Re: Comparing variables across different years
Posted by [UAB_user](#) on Tue, 07 Apr 2015 23:20:03 GMT
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This is great! Thank you very much!

Do you think it would be possible do multivariate models? Specifically, logistic regression models?

I was thinking of using "year" as a variable to adjust for in the models, but I run into the same problems with PSUs as before.

Thanks for your help!

Subject: Re: Comparing variables across different years
Posted by [Reduced-For\(u\)m](#) on Tue, 07 Apr 2015 23:27:26 GMT
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You can add covariates to the model in exactly the same manner. Just instead of running a least-squares regression you run a logit:

```
local X "list variables here"
```

```
svy: logit Y `X' i.year, noconstant
```

Something like that. Or, if you wanted to compare changes in the X's over time, you could interact the variable with the survey year dummies, and run tests of statistical significance on the coefficient from the interaction term.

For your PSUs, just generate a new PSU variable that is PSU*10000+SurveyYear, and in your svyset command, set your cluster to that new PSU variable.

Subject: Re: Comparing variables across different years
Posted by [UAB_user](#) on Wed, 08 Apr 2015 03:39:50 GMT
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Great! Thank you!

Subject: Re: Comparing variables across different years
Posted by [SAK_Nepal](#) on Wed, 23 May 2018 08:54:08 GMT
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Can you please share the syntax file about how you have done this analysis as I am struggling to do the same?

Thank you

Subject: Re: Comparing variables across different years

Posted by [Liz-DHS](#) on Mon, 02 Jul 2018 15:51:40 GMT

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Please state which data set(s) and survey year(s) are part of your analysis. Share your code and look at the following resources:

The Guide to DHS Statistics [https://](https://dhsprogram.com/publications/publication-dhsg1-dhs-questionnaires-and-manuals.cfm)

dhsprogram.com/publications/publication-dhsg1-dhs-questionnaires-and-manuals.cfm,

The Standard Recode Manual [https://](https://dhsprogram.com/publications/publication-DHSG4-DHS-Questionnaires-and-Manuals.cfm)

dhsprogram.com/publications/publication-DHSG4-DHS-Questionnaires-and-Manuals.cfm,

using Datasets for Analysis <https://dhsprogram.com/data/Using-Datasets-for-Analysis.cfm> and a series of videos to help

guide you with your analysis <https://blog.dhsprogram.com/dhsdataintro/>.

The IUPMS website is also a great resource: <https://www.idhsdata.org/idhs/> For specific assistance with Stata, please visit

http://www.cpc.unc.edu/research/tools/data_analysis/statutorial/ [url]

You may also want to search keywords which might help guide your analysis. After reviewing these resources, if you still have a question, please feel free to post again. Thank you!
