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Subject: Variable for Age-Specific Fertility Rate

Posted by [pndagu263](#) on Thu, 18 May 2017 17:41:12 GMT

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Dear Statalisters

I want to analyse potential sources of the differences in total fertility rates (TFRs) between two DHS surveys for Zimbabwe, 2005 and 2010. I aim to apply the decomposition method by Oaxaca-Blinder to identify contributions to fertility change.

I had initially planned to conduct the decomposition using the mvdcmp programme by Powers et al. (2011) using as my outcome variable children ever born (v201). The problem with v201 however, is that it is not age standardised and therefore not an optimal indicator for total fertility rate. In fact, average children ever born is higher in the Zimbabwe DHS2005-06 compared to ZDHS2010-11 whereas the ASFR and TFR estimates are higher in 2010-11 compared to 2005-06 survey. My intention now is to use age-specific fertility rate (ASFR) as a proxy for TFR as my dependent variable given that it is age standardised.

My question then is that how can I generate in STATA a variable for ASFR for single-year age groups (v012) in DHS. I tried the following;

```
For exposure [person-years];
gen top = v008 - 1
gen bot = v008 - 36
gen turn15 = v011 + 180
replace bot = turn15 if turn15 > bot
drop if bot>top
```

```
gen agebot = int( ((bot+top)/2 - v011)/12)
gen expo= top - bot + 1
```

```
Then for events [since I'm not well versed with looping];
gen birth1=0
replace birth1=1 if b3_01!=.
```

```
gen birth2=0
replace birth2=1 if b3_02!=.
```

```
gen birth3=0
replace birth3=1 if b3_03!=. I did this upto birth20 then generated variable for births by summing
birth1 to birth20. However, deriving an ASFR indicator from here is not working out well.
```

I am aware of tfr2 which computes single-year age-group ASFRs through the tabexp command. My problem is that I want to generate a variable in the dataset which assigns by age (v012) an estimate of the ASFR that I will be able to use as an outcome variable in decomposition analysis.

I thank you in advance for your assistance.

Best regards,

Pedzisai Ndagurwa

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Subject: Re: Variable for Age-Specific Fertility Rate  
Posted by [kbietsch](#) on Wed, 20 Sep 2017 17:57:18 GMT  
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What I have done in the past for decomposition of fertility rates is to create my birth count for individual women(usually in the last 3 years, the same cut off as TFR), create my exposure (usually 3 years, less for teenagers). Then I do a decomposition of a Poisson regression, with births as my outcome, and offset with exposure. I include dummy variables for ages groups, then you will be able to see the differences in the composition of the age groups, as well as the differences in rates. I use the mvdcmp package.

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Subject: Re: Variable for Age-Specific Fertility Rate  
Posted by [pndagu263](#) on Wed, 20 Sep 2017 18:15:38 GMT  
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Thank you for the response. I will take your advice on board

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Subject: Re: Variable for Age-Specific Fertility Rate  
Posted by [Jayanta](#) on Thu, 12 Mar 2020 17:43:23 GMT  
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Hello,

I want to do the regression analysis with TFR/ASFR and the socioeconomic variables using Bangladesh DHS data. Can you please suggest how to proceed in Stata? If you have Stata codes please provide the same. I am aware about tfr2 use in Stata but not sure how to use it in case of regression analysis with individual level data.

Thanks if advance for your support.

Regards,  
Jayanta

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Subject: Re: Variable for Age-Specific Fertility Rate  
Posted by [schoumaker](#) on Fri, 13 Mar 2020 08:17:22 GMT  
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Hello,

tfr2 allows you to estimate the effects of individual level variables on fertility.

For instance,

```
xi: tfr2 i.v106
```

will provide rate ratios by level of education.

```
xi: tfr2 i.v106 i.v025
```

will provide rate ratios by level of education and place of residence.

tfr2 uses a Poisson regression. These models assume that the age pattern of fertility is the same across categories of explanatory variables. This is usually OK, but you may want to relax that assumption.

The tabexp stata command (that comes with tfr2) can be used to prepare data that you can analyze with a Poisson regression (or another model). tabexp will give you the number of births and exposure for the combinations of variables that you would like to include in your model.

For instance

```
xi: tabexp i.v106 i.v025
```

If you want to take account of clustering in your model, type

```
xi: tabexp i.v106 i.v025, cluster(v001)
```

Hope this helps,

Best.

Bruno

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Subject: Re: Variable for Age-Specific Fertility Rate

Posted by [Jayanta](#) on Sat, 21 Mar 2020 16:43:00 GMT

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Dear Bruno,

Thank you for your prompt reply.

I've pooled seven rounds of DHS data. In this case, I would like to use the multi-level regression model with TFR (as dependent variable) and other socioeconomic variables (independent variables) such as education, wealth index, type of residence, religion, community-level variables (drawn from the person level response), etc. Also, how we can use the combined data to measure period wise TFR.

Please see the attached file, based on all seven rounds of data, which is the output of your given syntax. I can understand that this calculation gives a cluster wise calculation, but I wonder if I should use it for pooled data because it gives only one central estimate of the date. Also, how to coordinate this estimation data for regression model because there is no id available and several similar clusters. And the figures are based on a range of just 5 years(15,20,25,30,35,40,45).

Please help me in this regard.

Thank you in advance.

Regards,  
Jayanta

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