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Subject: Panel data set for cross country analysis  
Posted by [Hoyo](#) on Wed, 08 Jul 2015 02:24:11 GMT  
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Dear All,

I wonder if anyone have tried to construct cross country panel data set based on DHS data. Could you please suggest me any papers used cross country analysis using panel data?

Thank you in advance.

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Subject: Re: Panel data set for cross country analysis  
Posted by [Bridgette-DHS](#) on Wed, 08 Jul 2015 16:31:30 GMT  
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Following is a response from DHS Senior Analyst, Tom Pullum:

The DHS website ([www.dhsprogram.com](http://www.dhsprogram.com)) includes, under "Publications", citations for 1722 publications in 451 journals. Those are today's numbers--they keep going up. You can search through that list for possible references to such data sets.

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Subject: Re: Panel data set for cross country analysis  
Posted by [Hoyo](#) on Thu, 09 Jul 2015 08:10:27 GMT  
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Thank you very much for your reply. Actually I tried hard to find one, but I couldn't. The paper's analyzed DHS in my field only used cross sectional analysis. So I wonder "Is it theoretically and technically possible to construct cross country panel data set out of DHS?" Thanks again for your time.

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Subject: Re: Panel data set for cross country analysis  
Posted by [Bridgette-DHS](#) on Thu, 09 Jul 2015 14:34:23 GMT  
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Following is another response from Tom Pullum:

Analytical Study 38 ( <https://www.dhsprogram.com/publications/publication-AS38-Analytical-Studies.cfm>) does the sort of thing you are suggesting. Yes, technically it is possible, although the data management may be challenging. I believe it can produce useful results, if that's what you mean by theoretically possible. But I'm not sure everyone would agree.

If you are pooling countries, look for interaction effects--that is, for country effects that are not just additive. For example, the relationship between education and contraceptive use may not be the same in every country. My main advice would be to avoid over-simplification....

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Subject: Re: Panel data set for cross country analysis  
Posted by [Reduced-For\(u\)m](#) on Thu, 09 Jul 2015 21:13:04 GMT  
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Hoyo,

What are the outcomes you are interested in? Creating a pseudo-panel from DHS is possible, but possible in a number of different ways and depends crucially on the outcomes you are trying to look at. For instance, you could generate a panel of birth years for children; or a panel of survey rounds; or a panel of within-household births; or....

So if you give me some idea of the outcomes you are interested in, or the unit of analysis, or the research question, I might be able to point you to some work.

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Subject: Re: Panel data set for cross country analysis  
Posted by [Hoyo](#) on Fri, 10 Jul 2015 06:43:00 GMT  
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Thank you very much indeed for your reply.

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Subject: Re: Panel data set for cross country analysis  
Posted by [Hoyo](#) on Fri, 10 Jul 2015 07:11:12 GMT  
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Hello,

Thank you so much for your reply. I aim to assess socioeconomic determinants of health inequalities in low and middle income countries. My dependent variable is Concentration Index of Under-five Mortality rate. I am pooling countries over time from 2000 to 2013, because I am also interested in how changes in inequality in health intervention coverage affect inequality in health outcome. But DHS is conducted independently in each countries, which makes the panel unbalanced. I wonder this type of heavily unbalanced data can produce unbiased estimates or not.

Thank you very much for your kind consideration and time. Your suggestions will be highly appreciated.

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Subject: Re: Panel data set for cross country analysis

Posted by [Reduced-For\(u\)m](#) on Sat, 11 Jul 2015 00:32:46 GMT

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The unbalanced-ness (if that is a word) of the panel stems from, I think, you conceiving the panel as a survey-round specific panel. So the panel would be Country as the group variable and Survey Year as the time variable - an "observation" in the panel would be a single survey from a single country.

In that case, yes, you have a really unbalanced panel. You won't have very many observations per year (to use Year fixed effects or dummies) and you would only be able to use about 40 countries. But you could still look at changes over time within each country and aggregate that over all countries (a "within" estimator, or a "country fixed effect" estimator without time dummies). And it is not clear to me that the unbalanced panel problem is so big as to make any estimates worthless... you'd have to search through the literature on that, but it isn't always a huge problem.

Another option is to generate a country-by-cohort panel, so that for each country and each birth-year, you estimate the U-5 mortality rate for cohorts born in that year. You could do this using the birth history and generate a (mostly) balanced panel for about 2 decades from each country. The big issue here is that you have to use data from way back in birth histories, and measurement error about year of birth grows really fast as you ask mothers to look back over time.

An alternative to this would be to use U1 mortality. Then you could safely go back about 10 years or so from each survey date, having a reasonable U1 mortality rate estimate for each year.

One other problem: you want to look at SES determinants of child mortality. But things like, say, wealth index\* or maternal education are measured in the survey year, and you only know U5 mortality rate for children born at least 5 years before the survey. So a household current SES measure is possibly a poor measure of the SES facing the household when that child died (or that caused that child to die). This problem has no obvious solution unless you can bring in local aggregate data from another source or use only time-invariant characteristics of countries (if any such exist).

\*Also - wealth index is not comparable across countries or over time, so it would be a bad covariate choice in this case.

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Subject: Re: Panel data set for cross country analysis

Posted by [Hoyo](#) on Sun, 12 Jul 2015 11:30:43 GMT

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Thank you so much for your insightful comment. It is indeed useful.

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Subject: Re: Panel data set for cross country analysis

Posted by [hoyohoyo](#) on Thu, 01 Feb 2018 17:49:44 GMT

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Could you please explain why wealth index is not comparable across countries or over time?  
Thank you!

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Subject: Re: Panel data set for cross country analysis  
Posted by [Bridgette-DHS](#) on Thu, 01 Feb 2018 18:48:29 GMT  
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Following is a response from Senior DHS Stata Specialist, Tom Pullum:

Please see the descriptions and analysis of the wealth index in DHS publications such as the following methodological reports:

<https://www.dhsprogram.com/pubs/pdf/MR9/MR9.pdf>  
<https://www.dhsprogram.com/pubs/pdf/MR15/MR15.pdf>

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Subject: Re: Panel data set for cross country analysis  
Posted by [hoyohoyo](#) on Thu, 01 Feb 2018 18:51:14 GMT  
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Thanks a lot!

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