
Subject: How to use GPS data

Posted by [Jennie](#) on Sat, 13 Mar 2021 16:49:48 GMT

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I am using the DHS datasets for the Uganda survey year 2006 (dataset UGIR52DT) and 2011 (dataset UGIR61DT) and also the GPS data (UGGE53FL) and (UGGE61FL). I have tried to search in the forum for an answer to the following questions but I didn't find the specific answer and explanation I was looking for. I wonder if you have any suggestions:

1. Is it possible to match DHS clusters from the 2006 and 2011 surveys? So, I wonder if I can match the unique id from both surveys? Do they have the same id?

Also, do you know where I could find information about how to use GPS datasets (for example where it says if matching id is possible?)

2. If (1) is not possible, I wonder if I could match clusters to districts. But since only information on regions are available as a variable in dataset 2011, I wonder if you have any suggestions how to do this? My thought is to match clusters to the 135 districts. I read that since clusters are geomasked it might be problematic but do you think it is possible?

Thank you for your help!

Kind regards,

Jennie

Subject: Re: How to use GPS data

Posted by [hamid](#) on Sat, 20 Mar 2021 09:06:56 GMT

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Dear Jennie,

1. The surveys you are working with are not panel, but cross-sectional, meaning that different individuals were surveyed in each round. You cannot merge the two years to run longitudinal models at the household/individual level (e.g., Fixed Effects regressions).

2. Merging the two surveys to obtain a regional-level panel dataset is usually possible if you have GPS coordinates in both.

I would proceed as follows:

- download a shapefile for the correct administrative level of Uganda;
- generate a dataset with only the DHS individual/household identifiers plus latitude and longitude and create a spatial point dataset
- assign to your spatial point data the same coordinate reference system of the shapefile (i.e., account for earth curvature).
- project the points from your surveys onto the shapefile (spatial polygon data): this will result into a spatial point dataset with a data slot in which you have hh/ind ids and the regional identifier

- merge the spatial point data-slot to the original DHS surveys using hh/ind ids
- consider that if the coordinates provided by DHS have been randomly offset, a small degree of error will apply, but this would be random and thus it only would translate in some degree of attenuation bias (not systematic).

I hope this helps.

Best,
Hamid

Subject: Re: How to use GPS data
Posted by [Jennie](#) on Sun, 21 Mar 2021 10:25:09 GMT
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Dear Hamid,

Thank you so much for your reply! Your explanation is very helpful.

Kind regards,
Jennie

Subject: Re: How to use GPS data
Posted by [lucasj_lm](#) on Thu, 01 Apr 2021 00:07:43 GMT
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I am attempting to do something similar for Uganda 2011! I am not able to identify any way of finding the GPS coordinates associated with individual survey responses in the 2011 survey.

I have access to the GPS data, but there are no latitudes and longitudes listed anywhere in the files I downloaded?

Subject: Re: How to use GPS data
Posted by [Jennie](#) on Fri, 02 Apr 2021 12:53:03 GMT
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Hi,

Not sure if this solves your problem. But if you have access to the GPS data, you can see that the GPS data and the standard DHS file are separate files? So, if I understand it correctly, you have to convert the GPS data to a dta file and then match with the standard DHS file. If you are using Stata you could google shp2dta.

Best,

Jennie

Subject: Re: How to use GPS data
Posted by [lucasj_lm](#) on Sun, 04 Apr 2021 02:35:43 GMT
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Thanks Jennie, I'm using the command: shp2dta using UGGE53FL, database(2016GPS) coordinates(2016GPSCoords)

But I get the message "command shp2dta is unrecognized". I have installed the shp2dta package.

Any ideas on how to resolve this?

Thanks!

Subject: Re: How to use GPS data
Posted by [Jennie](#) on Tue, 06 Apr 2021 06:28:16 GMT
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I would have thought that you needed to install the shp2dta package, but you write that it is already installed. Maybe you can uninstall and then reinstall shp2dta? (ssc install shp2dta). Another useful command is "search shp2dta". Unfortunately not sure what the problem is, maybe someone else in this forum has a suggestion. Hope you solve the problem.

Best,
Jennie
