
Subject: Replicate Wealth Index India

Posted by [rafael](#) on Tue, 04 Jun 2013 10:03:38 GMT

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Hi!

I am working with the indian NFHS-3 data. I intend to replicate the calculation of the wealth index in another dataset. In order to do so, I am first trying to understand how the index was calculated in the DHS data.

I found the list of variables used in the process in the report on the NFHS-3 (p.43) and I am calculating the principal components analysis in Stata.

I am using the following code and the varlist below. For categorical variables I generated dummies first.

```
# Principal component analysis:  
pca varlist, components(1)
```

```
# Extract first component  
Predict index, score
```

Doing so I get an index that is close to the original index (hv271). But in some cases the households are not classified in the same order. For example if I classify households in wealth index quintiles according to the original index and the one I reconstructed and then compare results, I end up with a diverging classification in about 4% of all cases.

Have I missed a variable or is there an option of pca that I should have set?

If anyone has managed to replicate the index exactly I would be very glad for any input!

Many thanks and regards
Rafael

Varlist:

```
hv206 electricity  
sh56a house has any windows  
sh56b house has windows with glass  
sh56c house has windows with screens  
sh56d house has windows with curtains or shutters  
hv201 source of drinking water  
hv205 type of toilet facility  
hv213 main floor material  
hv215 main roof material  
hv214 main wall [exterior] material  
hv226 type of cooking fuel
```

sh58 owns this or any other house
memsleep number of sleeping rooms per household member (hv126/hv009)
hv247 owns a bank account or post office account
sh47b mattress
sh47c pressure cooker
sh47d chair
sh47e cot/bed
sh47f table
sh47g electric fan
hv207 radio
sh47i b&w television
sh47j colour television
sh47k sewing machine
hv243a mobile telephone
hv221 telephone (non-mobile)
sh47n computer
hv209 refrigerator
hv243b watch
hv210 bicycle
hv211 motorcycle/scooter
hv243c animal-drawn cart
hv212 car
sh47u water pump
sh47v thresher
sh47w tractor

Subject: Re: Replicate Wealth Index India
Posted by [Liz-DHS](#) on Tue, 25 Jun 2013 17:07:33 GMT
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Dear User,
You may want to refer to DHS Comparative Report 6 The DHS Wealth Index
<http://www.measuredhs.com/pubs/pdf/CR6/CR6.pdf>. It was written by two of our experts on the subject.

Subject: Re: Replicate Wealth Index India
Posted by [rafael](#) on Tue, 02 Jul 2013 07:40:34 GMT
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Dear Liz

Thank you so much for the hint. I have already consulted the mentioned report, unfortunately it did not provide the information I had hoped for. It's focus is much more general, while I would require detailed information for the case in India. My replicate of the index is already rather close to the

original, but I do not manage to completely replicate the index. If you have any more detailed information available or could point me to someone who does, that would be very helpful!

Thank you & Regards
Rafael

Subject: Re: Replicate Wealth Index India
Posted by [Liz-DHS](#) on Wed, 03 Jul 2013 18:34:55 GMT
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Dear Rafael,
Here is a response from one our experts, Dr. Shea Rutstein:
Attached is the SPSS syntax file. It is a text file and can be opened as such (Word, Wordpad, Notepad, etc.). Rafael should note the following: 1) The syntax is set for the raw data file. 2) There were two versions of the India NFHS-3 data, the difference being a couple of the smaller states were not included in the first version. The syntax attached was that run on the second version. 3) Dichotomous variables need to be constructed for all categorical variables such as water supply, type of toilet, etc.

File Attachments

1) [IABASSET.SPS](#), downloaded 1449 times
