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 1729 times