
Subject: Wealth Index - Same Country, Different Years
Posted by [lucasj_lm](#) on Mon, 19 Jul 2021 00:36:06 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi there,

I was just wondering - is it valid to compare the wealth index across the 2006, 2011 and 2016 Uganda surveys? They appear to be on the same scale as each other with up to 5 digits. In contrast, for the 2001 survey, it is a number from -2 to 4. Is there any way to make the 2001 wealth index comparable to the others?

Thank you!

Lucas

Subject: Re: Wealth Index - Same Country, Different Years
Posted by [Bridgette-DHS](#) on Mon, 19 Jul 2021 12:21:27 GMT
[View Forum Message](#) <> [Reply to Message](#)

Following is a response from DHS Research & Data Analysis Director, Tom Pullum:

I looked at the PR file for the 2001 survey, UGPR41FL.dta. The wealth index was new at the time of this survey and the variable names for it are different than the later standard, which is hv270 for the quintiles and hv271 for the continuous variable. In the 2001 survey, the quintiles were sh052 and the continuous variable was sh051. The range of sh051 was -1.0788 to 4.2405. You can get to a continuous scale with 5 digits just by moving the decimal point (multiplying by 10,000). You say the index goes from -1 to +1 but I don't see that. Let us know if this does not answer your question.

Subject: Re: Wealth Index - Same Country, Different Years
Posted by [lucasj_lm](#) on Tue, 20 Jul 2021 07:51:10 GMT
[View Forum Message](#) <> [Reply to Message](#)

Bridgette-DHS wrote on Mon, 19 July 2021 08:21
Following is a response from DHS Research & Data Analysis Director, Tom Pullum:

I looked at the PR file for the 2001 survey, UGPR41FL.dta. The wealth index was new at the time of this survey and the variable names for it are different than the later standard, which is hv270 for the quintiles and hv271 for the continuous variable. In the 2001 survey, the quintiles were sh052 and the continuous variable was sh051. The range of sh051 was -1.0788 to 4.2405. You can get to a continuous scale with 5 digits just by moving the decimal point (multiplying by 10,000). You

say the index goes from -1 to +1 but I don't see that. Let us know if this does not answer your question.

Thanks Bridgette! Sorry I edited my comment but maybe it didn't register - as you say it goes from -1.1 to 4.2. Are you sure 5 digits is correct? The other years range from -192,534 to 420,876, so I'm wondering if I should instead multiple the 2001 survey by 100,000 (6 digits)? This would make the 2001 survey range from ~ -100,000 to 400,000.

Subject: Re: Wealth Index - Same Country, Different Years
Posted by [Bridgette-DHS](#) on Tue, 20 Jul 2021 12:45:58 GMT
[View Forum Message](#) <> [Reply to Message](#)

Following is another response from DHS Research & Data Analysis Director, Tom Pullum:

If you are familiar with DHS data, then you know that the sample weights (hv005, etc.) are scaled up by a factor of 1,000,000 and given without anything to the right of the decimal. The factor is a mechanism to get many significant digits without using a decimal point. What you see with the continuous wealth index is the same, except that the factor is 10,000 rather than 1,000,000.

DHS multiplies the anthropometric Z scores (hc70-hc72) by a factor of 100. Same for children's heights and weights (hc2 and hc3). Percentages include a factor of 100. Death rates include a factor of 1,000. The maternal mortality ratio has a factor of 100,000. The same mechanism is at work in all cases. If you want to re-scale the Uganda 2001 values to compare with the later values, you multiply them by 10,000. OR you divide the values in the later surveys by 10,000.

The continuous wealth index is the first principal component of a principal component analysis (PCA), multiplied by 10,000. Four cut points are identified to break it into 5 equally sized quintiles (in terms of weighted de facto household members in the PR file). You could use the continuous index similarly to construct deciles, terciles, quartiles, etc. However, I would advise against over-interpreting the values of the continuous scale.