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Subject: Identifying individuals living in poverty by applying poverty ratio to wealth index score

Posted by [Yiqun Luan](#) on Wed, 01 Oct 2025 18:02:10 GMT

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Hello,

I am working on an analysis to estimate how many household members live in poverty in a given country-year. My procedure involves three steps:

Step 1: From the PR file, I keep the de jure population and rank individuals' wealth index scores, applying household sampling weights. The code is:

```
xtile wealth_rank_weight=hv271[aweight=hv012*hv005/1000000], nquantiles(total number of de jure population)
```

Question: Since I am working with the PR file, should I apply the weight as  $hv012 \cdot hv005 / 1000000$  or just  $hv005 / 1000000$ ?

Step 2: I obtain the country's poverty headcount ratio from the World Bank for the survey year and use this ratio as the percentile to identify the value of `wealth_rank_weight` at that percentile, which serves as the poverty cut-off:

```
centile wealth_rank_weight, centile(ratio)
gen cutpov_weight = `r(c_1)'
```

Step 3: I classify household members with `wealth_rank_weight <= cutpov_weight` as living in poverty:

```
gen pov_weight=0
replace pov_weight=1 if wealth_rank_weight<=cutpov_weight
```

Experiment: I also tried skipping Step 1, and directly applying the poverty ratio to `hv271` in Step 2, then proceeding to Step 3:

```
centile hv271, centile(ratio)
gen cutpov_weight = `r(c_1)'
```

```
gen pov_weight=0
replace pov_weight=1 if hv271<=cutpov_weight
```

Interestingly, the resulting `pov_weight` is the same as when I follow all three steps. Could you help me understand why this sameness occurs? Does this suggest that Step 1 can be skipped in the analysis? This would be very helpful, since running `xtile` with such a large number of de jure individuals in the `nquantiles` option is computationally intensive.

Thank you very much for your guidance!

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