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Subject: Constructing Wealth Incidence Curve  
Posted by [tednoel](#) on Mon, 03 Jun 2024 19:21:37 GMT  
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Hi all, just creating a post here to see if anyone might be able to assist. I am trying to create wealth index curves for Senegal using DHS data spanning from the years of 2015 to 2021 but there is something that I am either conceptually misunderstanding or not doing right with the code. I've pasted my code below for people to examine:

```
svyset [pweight=hv005], strata(hv023) psu(hv001)
gen wealth_quintile_2015 = hv270 if hv007 == 2015
gen wealth_quintile_2017 = hv270 if hv007 == 2017
```

```
* Calculate mean wealth for each quintile in 2015
svy: mean hv270, over(wealth_quintile_2015)
```

```
* Calculate mean wealth for each quintile in 2017
svy: mean hv270, over(wealth_quintile_2017)
```

```
* Merge the datasets
merge 1:1 wealth_quintile_2015 using wealth_quintile_2017, keep(match)
```

```
* Calculate growth rates between the two years
gen growth_rate = (wealth_quintile_2017 - wealth_quintile_2015) / wealth_quintile_2015
```

```
* Plot the Growth Incidence Curve
twoway (line growth_rate, sort title("Wealth Incidence Curve") xlabel(1(1)5) ylabel(, angle(0))))
```

As you can see I tried to incorporate population weights so that these wealth incidence curves could be representative at the household level... But nothing is working. When I am actually able to produce an incidence curve the curve is blank. I'm starting to think perhaps it's a problem with the variable itself? I didn't think there would be much issue using a wealth index because it would still capture levels of wealth which would be aggregated into the wealth incidence curve. Any advice here would be really appreciated. If wealth index is not suitable for creating a wealth incidence curve, is there a way to collapse the wealth index into a measurement of overall wealth? Thank you so much in advance!!!

### File Attachments

1) [Screen Shot 2024-06-03 at 10.21.17 PM.png](#), downloaded 60 times

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Subject: Re: Constructing Wealth Incidence Curve  
Posted by [tednoel](#) on Tue, 04 Jun 2024 12:42:47 GMT  
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Ok I now understand my original error. I had believed that there were numeric values associated with the "poorest" "poor" etc, categories for the wealth index. At this point I have shifted the

strategy to creating wealth indices that demonstrate the change in proportion of those who are categorized as "poorest" from 2015-2021 for Senegal. I can generate the graph but there are no indices and I suspect this is an issue of scale. I know I need to incorporate survey weights in the code but I'm not sure where to do this.

```
*** Disaggregate Wealth Quintiles by Year
svyset [pweight=hv005], strata(hv023) psu(hv001)
gen wealth_quintile_2015 = hv270 if hv007 == 2015
gen wealth_quintile_2017 = hv270 if hv007 == 2017
gen wealth_quintile_2018 = hv270 if hv007 == 2018
gen wealth_quintile_2019 = hv270 if hv007 == 2019
gen wealth_quintile_2020 = hv270 if hv007 == 2020
gen wealth_quintile_2021 = hv270 if hv007 == 2021
```

\*\*\*\*\* MY FIRST ATTEMPT

```
*Calculate the proportion of individuals classified as "poorest" within the variable for each year
egen poverty2015 = group(wealth_quintile_2015)
egen prop_poorest_2015 = mean(wealth_quintile_2015 == 1), by(poverty2015)
```

```
egen poverty2017 = group(wealth_quintile_2017)
egen prop_poorest_2017 = mean(wealth_quintile_2017 == 1), by(poverty2017)
```

```
egen poverty2018 = group(wealth_quintile_2018)
egen prop_poorest_2018 = mean(wealth_quintile_2018 == 1), by(poverty2018)
```

```
egen poverty2019 = group(wealth_quintile_2019)
egen prop_poorest_2019 = mean(wealth_quintile_2019 == 1), by(poverty2019)
```

```
egen poverty2020 = group(wealth_quintile_2020)
egen prop_poorest_2020 = mean(wealth_quintile_2020 == 1), by(poverty2020)
```

```
egen poverty2021 = group(wealth_quintile_2021)
egen prop_poorest_2021 = mean(wealth_quintile_2021 == 1), by(poverty2021)
```

\*\*\* This did not work so below is my second attempt

\*\*\*\*\*

```
* Calculate the proportion of individuals classified as "poorest" for each year separately
egen prop_poorest_2015_1 = mean(wealth_quintile_2015 == 1 & wealth_quintile_2015)
egen prop_poorest_2017_1 = mean(wealth_quintile_2017 == 1 & wealth_quintile_2017)
egen prop_poorest_2018_1 = mean(wealth_quintile_2018 == 1 & wealth_quintile_2018)
egen prop_poorest_2019_1 = mean(wealth_quintile_2019 == 1 & wealth_quintile_2019)
egen prop_poorest_2020_1 = mean(wealth_quintile_2020 == 1 & wealth_quintile_2020)
egen prop_poorest_2021_1 = mean(wealth_quintile_2021 == 1 & wealth_quintile_2021)
```

```
twoway (line prop_poorest_2015_1 prop_poorest_2017_1 prop_poorest_2018_1
prop_poorest_2019_1 prop_poorest_2020_1 prop_poorest_2021_1, ytitle(Proportion "Poorest"))
```

xtitle(Years) legend(off))

Neither one of these attempts produces a viable graph and I think I need to incorporate the sampling weights

### File Attachments

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1) [Screen Shot 2024-06-04 at 3.42.29 PM.png](#), downloaded 62 times

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**Subject: Re: Constructing Wealth Incidence Curve**  
Posted by [Janet-DHS](#) on Tue, 11 Jun 2024 20:01:29 GMT  
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Following is a response from DHS staff member, Tom Pullum:

I don't understand what you are trying to do. hv270 is a household-level variable, constructed in such a way that 1/5 of the de jure cases in the PR file are in each of the 5 quintiles. It is a measure of relative wealth in each survey, or each round of the Senegal Continuous Survey. It is not a measure of absolute wealth--or poverty. Thus there is no difference or change from one survey to another in the proportion of cases in the poorest category.

What do you mean by "wealth index curves" in your initial post? What kind of a "viable graph" are you looking for? You can use the continuous wealth index (hv271) to calculate a Gini coefficient to measure inequality. Is that what you are looking for? Or something else? Please say, in words, what you are trying to show with your figure, and then I'd be happy to try to help.

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