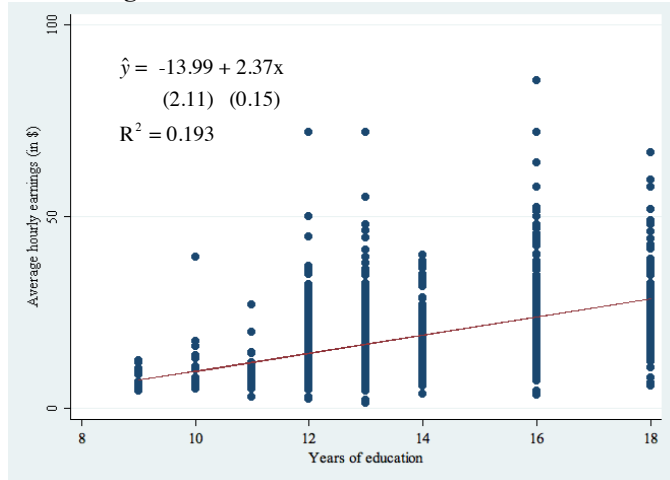


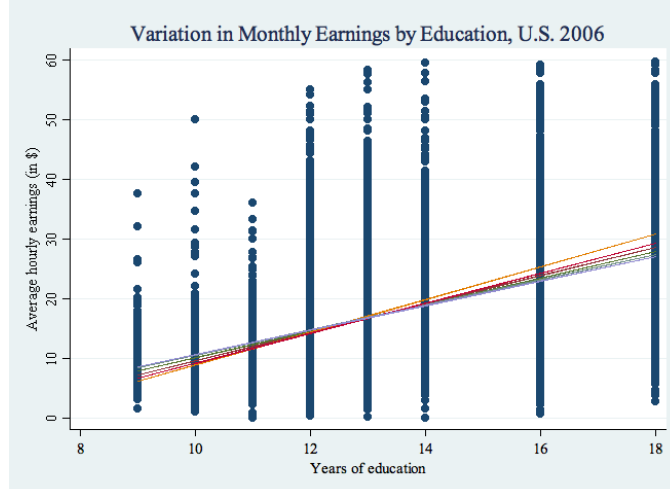
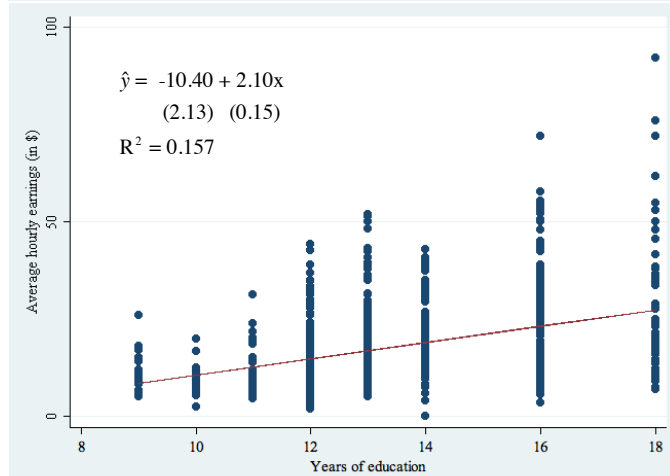
Consider the 12410 original observations as the true population:

$$\text{earnings/hr} = -12.72 + 2.27 * \text{educ} + u$$

Illustrating that estimators are random variables:



Sub-samples of 1000
observations

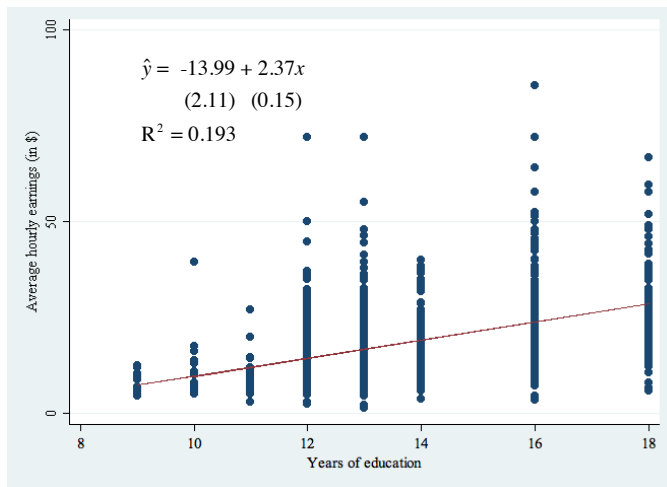


Estimated
slopes with
13 samples

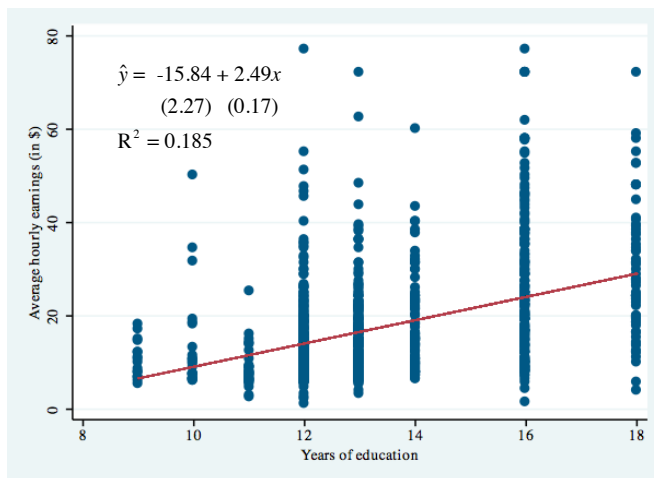
2.291
2.567
2.311
2.333
2.183
2.292
2.081
2.109
2.035
2.211
2.385
2.466
2.463

2.287

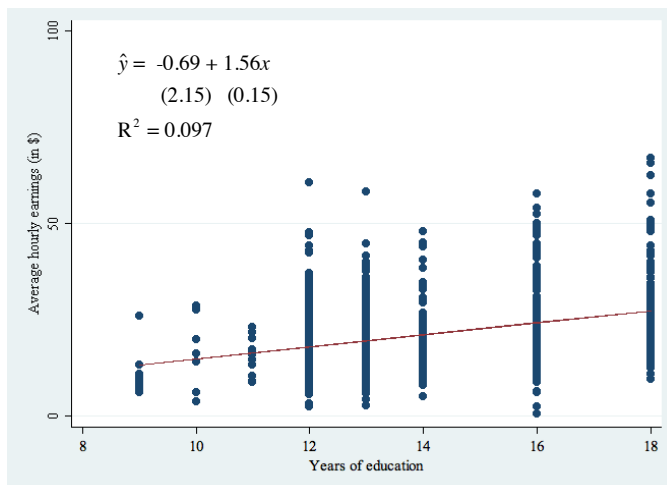
Bias due to non-random sampling:



Random sample
1000 observations



Non-random sample
1000 non-unionized workers



Non-random sample
1000 unionized workers