After-class exercise for lecture 13

36-313, Fall 2022

Due at 6 pm on Wednesday, 12 October 2022

A common measure of economic mobility is the probability that a child born into a household in the bottom 1/5 of the income distribution will be in the top 1/5 of the income distribution as an adult (say at age 30 or 40). In homework 7, we will be working with a data set that studies this at a national level for the US.

1. (3 points) Is this an intra-generational or inter-generational measure of mobility? Is it a measure of relative or absolute mobility?

2. (2) If there was no transmission of inequality, what percentage of children born in the bottom 1/5 of the income distribution would end up in the top 1/5?

3. (2) The actual probability of moving from the bottom 1/5 to the top 1/5 is about 0.08 (averaging over the whole country). What can you conclude from this about transmission of inequality?

4. (3) This week's data set will have measurements of this mobility rate for each of a large number of local regions called "commuting zones". Why we should expect the highest and lowest mobility rates to come from the smallest (lowest-population) commuting zones? Why would this be true even if the true probability was equal for all commuting zones? *Hint*: $\sqrt{\frac{p(1-p)}{n}}$.