

DAY 3 - PART 2: INEQUALITY

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DEFINITIONS AND MEASUREMENT OF INCOME DISTRIBUTION

To motivate this exercise, we will read: Fisher, Jonathan D., David S. Johnson, and Timothy M. Smeeding. 2013. "Measuring the Trends in Inequality of Individuals and Families: Income and Consumption." *American Economic Review*, 103 (3): 184-88.

In this problem we will replicate 2 main pieces of the paper. The first exercise will involve data arrangements to create a weighting variable, which we will use in the following exercises. Then we will replicate Figure 1 of the paper, which measures inequality using the Gini Coefficient. The third exercise will involve comparing trends in inequality across different data sources.

EXERCISE 1

1. Take the `FJS2013 - Data.dta` dataset. Create a variable called `scale`, which is the square root of family size, or `fam_size`.
2. Divide each of the following variables by the `scale` variable: `consumption`, `income`, `disp_income`, `hvp_nondurables`, `ahp_nondurables` and `ms_consumption`.
3. Create the new weighting variable `fwgt`, by multiplying `weight` times `fam_size`.
4. Save this dataset as `FJS2013 - Worked Data.dta`

EXERCISE 2

1. Take the `FJS2013 - Worked Data` dataset and restrict the sample to years between 1985 and 2010.
2. For each year, calculate the gini coefficient of `eq_income` using the new weighting variable
3. For each year, calculate the gini coefficient of `eq_disp_income` using the new weighting variable
4. For each year, calculate the gini coefficient of `eq_cons` using the new weighting variable
5. Merge the gini coefficients from the CPS survey, which are available in the `CPS Gini` dataset.
6. Plot the evolution of the gini coefficient across time for CPS Income, Income, Disposable Income and Consumption

EXERCISE 3

1. Take the `FJS2013 - Worked Data` dataset and restrict the sample to years between 1985 and 2010.
2. For each year, calculate the gini coefficient of `eq_income` using the new weighting variable
3. For each year, calculate the gini coefficient of `eq_disp_income` using the new weighting variable
4. For each year, calculate the gini coefficient of `eq_cons` using the new weighting variable
5. For each year, calculate the gini coefficient of `eq_hvp` using the new weighting variable

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6. For each year, calculate the gini coefficient of `eq_ahp` using the new weighting variable
7. For each year, calculate the gini coefficient of `eq_ms` using the new weighting variable
8. For each of the previous gini calculations, compute the mean across years, and create a variable that measures the deviation from the mean for each year.
9. Plot the evolution of the mean gini coefficient deviation across time for Consumption, HPV Consumption, AHP Consumption, MS Consumption and Disposable Income.