

ECON 204: Youth Unemployment Interventions Lab

You are going to be analyzing (some of the) data from the paper “A Firm of One’s Own: Experimental Evidence on Credit Constraints and Occupational Choice” by Andrew Brudevold-Newman, Maddalena Honorati, Gerald Ipapa, Pamela Jakiela, and Owen Ozier, published in the *Review of Economics and Statistics*. To get started, download `ECON-204-youth-lab-template.do`. Save it on your computer, replacing the “template” part of the file name with your own last name. Delete the word “TEMPLATE” from the comment at the top of the file, and add your name on the “YOUR NAME” line. Modify the do file so that it runs from start to finish, loading the data from github, and generates your finished figure.

0. Before you get started on the steps in the lab, familiarize yourself with the data. Use `describe` and `summarize` to list all the variables in the data set. What values does the variable `treatment` take on? Do a cross-tab (using the `tabulate` command) of `treatment` with the `franchise` and `grant` variables to figure out what the different values of the `treatment` variable represent.

1. The code

```
collapse (mean) mean_selfemp = selfemp mean_income = income ///
        (semean) se_selfemp = selfemployment, by(treatment)
```

shrinks the data set from a person-level data set (where each observation represents one young woman assigned to one of the treatment arms in the study) to a treatment-level data set. Run the do file and then use `list` to look at the resulting (miniature) data set. Then extend the code so that you also store the standard error of the mean of the variable `income` when you collapse the data.

2. The code below generates a bar graph showing the mean rate of self-employment in the Control group and the Franchise treatment arm.

```
twoway ///
    (bar mean_selfemp treatment if treatment==1, color(gray) barw(0.9)) ///
    (bar mean_selfemp treatment if treatment==2, color(midblue) barw(0.9)), ///
    legend(off) ylabel(0(0.1)0.4) ///
    xlabel(1 "Control" 2 "Franchise", noticks) ///
    xtitle("")
```

Go through the code and make sure that you understand each part of the command. Then modify the code so that:

- (a) The outcome is `income` rather than `self-employment`
- (b) The range of the y-axis and the axis labels are adjusted accordingly
- (c) The graph includes the `grant` treatment in addition to the `franchise` treatment and the control group
- (d) The y-axis has an appropriate title

3. Extend the code so that you define two new variables, **upper** and **lower**, indicating the upper and lower limits of the 95 percent confidence interval for the mean of **income**.
4. Add the confidence intervals to your graph as an **twoway** additional layer. Instead of bars, you will plot these using **twoway**'s **rcap** function. Adjust the y-axis labels as needed. Save your graph as a pdf so that you can upload it to gradescope together with your do file.