

### Assignment #1

Posted on Monday June 22, 2019

Due at 11:59 p.m. Eastern on Wednesday July 1, 2020

### Instructions

Please submit on Canvas a word document or PDF with your answers to the questions below.

### Questions

*Note: Most of the questions do not have one “correct” answer that we are looking for. The idea is to think more about research design. Your answers can be brief.*

1. In this question you will engage with recent research on COVID-19.
  - a) Start by reading the [Economic tracker paper](#) and/or watching the [presentation video](#). First summarize briefly a few take aways that you have learned from the reading or watching the presentation video.
  - b) Now turn to the [interactive website](#). Use the website to explore a few states or cities that are of interest to you (e.g., perhaps your hometown or a place that you have spent some time or read about).

Examine the patterns for a number of different groups (e.g., lowest income, high income) and outcomes (e.g., earnings, spending, time spent outside the home).

- (i) Use the button in the top right of the website to export and save a .png graph to include in your assignment solutions.
    - (ii) Describe what you see, and what data are being visualized, while tying it back to the overall theme of the paper as you discussed in part (a). For example, you might contrast outcomes in Cambridge, MA vs. Dorchester, MA and relate what you know about these areas to the findings regarding differential spending reduction by income.
2. The term “research design” is prominent in medical journals. Its use in economics originates from Princeton University in the 1980s, and especially labor economists David Card and Alan Krueger. According to David Card:

*“...The New England Journal would come in every week, ... and the beginning of each article would have ‘research design’ ...and if you’ve never seen that before and you were educated as an economist in the 1970s or 1980s, that just didn’t make any sense. What is research design? And I remember one time I said, ‘I*

*don't think my papers have a research design.' And so that whole set of terms entered economics as a result of those kinds of changes in orientation.*"<sup>1</sup>

In class on June 22, we discussed two research designs to estimate the causal effect of children on female labor supply:

- a. Event study research design
- b. Twins at the second birth quasi experiment

Which of these research design do you find the most convincing? Explain briefly the pros and cons of each design.

- 3. In later assignments, we will analyze data using statistical software. To help get started, please download and install the program [Stata MP 16](#) from FAS downloads page. Then complete JPAL's Stata [Module 101](#) to get acquainted with the program. (If you have used Stata previously and Module 101 seems too basic, instead complete Stata Module [102](#), [103](#), or [104](#) depending on your interest).

Note that the software license expires on June 30, but Harvard will replace the installation files with an updated license. Unfortunately, that means that next week you will have to download the new installation file (and uninstall the current version). We apologize for the inconvenience.

---

<sup>1</sup> This quote is from an [interview](#) with David Card and Alan Krueger.