Assignment #2: Replication Exercise and Report

Replication exercises are a useful learning-by-doing way to get started with research. This is likely to involve using methods and software packages that you have had very little experience with, and you will need to work more independently to troubleshoot issues that arise (as they inevitably do in research!). The goal of this exercise is to expose you to a more independent, real-world computational experience and instill in you the confidence to carry out your own computational work in your research project.

For this assignment, choose one of the four papers we have pre-selected below to replicate and modestly extend. You will download the data used in the paper, write code to analyze the data, create tables and/or figures of results, and include a write-up. See the specific instructions of which findings to replicate and extend for each paper.

Your write-up should be 5 pages and provide an overview of the paper, a discussion of your attempt to replicate the results and any issues you encountered, your results from the replication, and a modest extension to the paper. This should be written as a paper (not an outline) and include proper citations. It should be written clearly in your own words and without grammatical errors, as clear exposition is an important part of the research process. You will also attach your programming code to your GitHub project and include a README file for others to be able to replicate your work.

Paper options:

1. **Garthwaite, Craig, Tal Gross, and Matthew J. Notowidigdo. "Public health insurance, labor supply, and employment lock."** *The Quarterly Journal of Economics* **129, no. 2 (2014): 653-696.**

   Instructions:
   1. Read the paper and find the replication package online (hint: replication packages are sometimes posted on journal webpages, author webpages, or data archives). Note that this paper's README file is pretty bare bones (yours should be more complete than this).
   2. Replicate Tables 1 and 2 and Figures 2 and 3. The data used to create these tables and figures is given in the replication package, but please re-download the data used in these tables and figures yourself (https://www.ipums.org/ may be helpful here). Note: for Table 2, you do not have to calculate block bootstrap standard errors and p-values as in the table. Instead, calculate robust standard errors and print the associated p-values.
   3. Extend the analysis by restricting the control group to a different subset of states that you believe might be a useful control group. Add a third column to Table 1 with your new control group and rerun the analyses to produce a new version of Table 2 and Figures 2 and 3. In your write-up of the replication exercise, be sure to explain why you chose the subset of states, your findings, and how (and why!) they possibly differ from the main results.

2. **Bostwick, Valerie, Stefanie Fischer, and Matthew Lang. "Semesters or quarters? The effect of the academic calendar on postsecondary student outcomes."** *American Economic Journal: Economic Policy* **14, no. 1 (2022): 40-80.**

Instructions:
1. Read the paper and find the replication package online (hint: replication packages are sometimes posted on journal webpages, author webpages, or data archives).
2. Replicate Tables 1, 2, and 3 and Figures 1 and 2. The data used to create these tables and figures is given in the replication package, but please re-download the data yourself.
3. Extend the analysis by including at least one more year of IPEDS data, which you will need to download. Produce new versions of each of the tables and figures. In your write-up of the replication exercise, be sure to touch on why your results differ from the main results, if they do.

1. **Schoellman, Todd. "Early Childhood Human Capital and Development."** *American Economic Journal: Macroeconomics***, vol. 8, no. 3 (2016): 145-174.**

Instructions:
4. Read the paper and find the replication material. Your submission must include a description of the replication material (the location, the file format, etc.).
(Hint: replication packages are sometimes posted on journal webpages, author webpages, data archives, or in appendices).
5. Replicate Table 1 and Figures 2-5 in the published paper. The raw data used to create these tables and figures are typically included in the replication package. Note that one of the goals of the replication exercise is to familiarize yourself with sources of primary data and your submission must include a summary of how you accessed and downloaded these data (e.g., what was the URL, did you have to create a user account, were you required to download the data from an FTP server,…).
6. Section III. contains a structural model of human capital accumulation. You do not need to replicate the model or the results reported in this section.
7. Explore if the results are robust to adding additional data from more recent editions of the American Community Survey (ACS) and/or the population census.

2. **Crowley, Meredith, Ning Meng, and Huashen Song, "Tariff scares: Trade policy uncertainty and foreign market entry by Chinese firms."** *Journal of International Economics***, vol. 114, (2018): 96-115.**

Instructions:
1. Read the paper and find the replication material. Your submission must include a description of the replication material (the location, file format, etc.).
(Hint: replication packages are sometimes posted on journal webpages, author webpages, data archives, or in appendices).
2. Replicate Tables 2-7 in the published paper. The raw data used to create these tables and figures are typically included in the replication package. Note that one of the goals of the replication exercise is to familiarize yourself with sources of primary data and your submission must include a summary of how you accessed and downloaded these data (e.g., what was the URL, did you have to create a user account, were you required to download the data from an FTP server,…). If access to the primary data was restricted and you relied on the dataset provided by the replication package, provide an appropriate explanation and description.