Prof. Rucker Johnson Spring 2022

Public Policy 240B
Writing Assignment

The writing assignment for this course is a short empirical paper that answers one of the six general questions outlined below. You are to utilize the techniques we've outline in class such as the multivariate regression model, interpreting coefficients, using *t*- and F-tests, the use of dummy variables, etc. when addressing your question. Select one of the six topics listed below and use the data provided on the class web page. Work in groups of 4-5 students, but for each additional person you must write an additional two pages and include an additional model specification. That is, it is a paper requirement of 7 pages for four people and 9 for groups of five. The paper is to be 7-9 pages, double spaced, 1 inch margins, 12 point type (not including tables and references). The six topics for the paper are the following:

Topic 1: Labor market impacts of drinking
Topic 2: Health care costs of obesity
Topic 3: Determinants of 5th grade test scores
Topic 4: The returns to college
Topic 5: Impacts of ACA on Health Insurance Coverage
Topic 6: Impacts of the minimum wage

- **What is the impact of alcohol consumption on labor market outcomes?** There are some suggestive results indicating that alcohol consumption may adversely impact labor market outcomes like employment and wages. You are to investigate this question using data from the National Longitudinal Survey of Youth and the STATA data set is called "alcohol_nlsy_writingassignment.dta". Most difficult aspect of project: Deciding how to measure alcohol use. There are many different ways.

- **How does obesity and being overweight impact health care utilization spending among the elderly?** Obesity rates have doubled in the past 30 years. Medicare, the federal health insurance program for the elderly, is the fastest growing expense in the federal budget. Knowledge of how obesity and being overweight impacts health will help identify the impact of these two conditions on federal budget outlays over time. You are to use data from the 2005 Medical Expenditures Panel Survey to examine this question. The data set for this project is named "senior_meps_writingassignment.dta". Most difficult aspect of project: Deciding what covariates to use and interpreting the results.

- **What are the determinants of test scores for 5th grade students?** A frequent measure of academic success is a score on a standardized exam. Authors have demonstrated that many characteristics of the student, their family, their home environment and their school are predictive of test scores. In this case, you will use data from the Early Childhood

Longitudinal Survey which is a nationally-representative survey. The original survey respondents were from the Kindergarten class of 1998-99 and children were re-surveyed in the 1st, 3rd, and 5th grade. The data for this project comes from the 5th grade followup. The data contains test scores in reading, math, and science, plus detailed information about the child, their family, and their school. For this data set, consider asking a very specific question, such as whether school type (private versus public) impacts test scores? Does a negative school environment generated by crime, violence or gangs impacts test scores? Does participation in extracurricular activities impact learning? Does TV rot your brain? Are children negatively impacted by divorce? There are lots of variables in this data set so there are many possible paper topics. The data set for this topic is named "ecls_5th_grade.dta". Most difficult aspect of project: Deciding on what to focus on as the covariate of interest and what to control for in the regressions.

- **How has the college premium changed over time?** The college premium is defined as the difference in ln(weekly earnings) or ln(hourly wages) between college and high school graduates. Data from a number of sources indicates that this gap has increased over time. Your job is to document the change in this premium. I have put together data from 1975 through 2010 for full-time/full year employed high school and college graduates aged 23-50 from the March Current Population Survey. This survey asks people about their earnings in the previous year so data from 1990 is for the 1989 calendar year. This data set is relatively large so I have put together two files: one for males, one for females. You can answer any number of questions for this broad topic? How has the premium changed for males? Is there a differential change in the value for blacks versus whites? Are there different trends in the college premium for males versus females? Most difficult aspect of project: The programming is more difficult than average and since you will have many years of results, you may want to display results in a series of graphs rather than tables.

- **Has the Affordable Care Act (ACA) Increased Insurance Coverage for Young Adults?** In an effort to increase health insurance coverage rates for young adults, the ACA required health insurance companies to provide insurance for children under age 26 through their parent's coverage. Using data from the March Current Population Survey for people aged 19-29, you are to estimate the impact of the ACA on insurance coverage rates for people under 26. This project will require that students read ahead about "difference-in-difference" models, but this is a fun and great project. The data set is named "aca_data_march_cps.dta". Most difficult aspect of project: Will require some work learning about the ACA and reading ahead about "difference-in-difference" models.

- **What is the impact of higher minimum wage rates on teen employment?** Over the past 30 years the real wages for people in the lower 50% of the wage distribution have fallen while the wages for those at the top of the distribution have skyrocketed. This has led to increased calls for much higher minimum wage rates. Currently there are efforts at the federal, state and local level to raise the minimum wage to $15/hour. Opponents of higher minimum wages argue that a higher minimum wage will reduce employment

among the least skills. In this project you are to estimate the impact of a higher minimum wage on employment of teenagers aged 16-19. This is a low-skilled group and one most likely impacted by the minimum wage. The data set is measures of teen employment at the state level from 1990 through 2013 (24 years) for all states and the District of Columbia (51 cross-sectional groups) for a total of 24*51=1224 observations. The data is from the March CPS, described above in the ACA example. The variation used to identify the model is the fact that some states have increased the minimum wage over time – state can raise their wage above the federal minimum level but not reduce it. Most difficult aspect of project: The model you will estimate is a "difference-in-difference" specification--we start to talk about these models this week.

Your paper should include an introduction that outlines why this is an important question (put the topic into context – why should someone care about this issue?), a brief outline of the econometric model, a description of the data, and a discussion of the econometric results (you do not need to provide a review of the relevant literature for this short paper). Your paper should include a table of descriptive statistics for your data set. When possible, you should also contain a detailed discussion of problems in your econometric specification, e.g. are the results potentially biased by omitted variables that are not in your sample. Discuss the limitations of the work – what does the paper not address and what are some shortcomings of the analysis. Grades for the paper will be based on the completeness of the paper (how thorough is the description of the data, discussion of empirical issues, etc.), how well written the paper is, the soundness of the empirical model, and your accuracy of the interpretation of the econometric model.

The data for the projects are in the *Assignments* portion of the class web page and I provide detailed descriptions of the data in PDF files as well. For the three projects above, the data descriptions also provide a link to web pages that describe in more detail the data set where your samples came.

Some hints/comments:

One of the more important skills that will be required of you in the workforce is the ability to distill a large and complex set of information into a nice neat package. At many different points in your work life you will be asked "what is the bottom line?" on a particular subject matter.

For this writing assignment, you will get some practice at this skill by summarizing the content in a non-technical manner. Here are a few things to keep in mind. Assume the audience for your summary is a non-technical audience. For example, suppose you work for a fairly smart medical doctor who is part of some health reform task force and he/she does not have an economic or statistical background. How would you convey to this person the basic elements of your paper?

- The data sets are relatively large. Make sure you that the memory used by STATA is large enough to accommodate the data sets. In all cases, type set memory 20m before loading the data. Twenty megs of RAM should provide ample space.

- Before you start playing with the data set, do some reading. See how other people have addressed the particular problem in the past.
- Please read chapter 19 of the textbook. It has a number of useful suggestions about how to write an empirical paper.
- Put some thought into the model. Think about what variables should be used as outcomes (y's), what should be used as control variables (x's).
- Think about how the variables should be measured? Should they be logged or linear?
- Just because a variable is in the data set does not mean it should be used. Think about what is an appropriate control variable and what is not.
- Before running a regression, take a look at the data set in a systematic way. Get the descriptive statistics for important variables. Look at the means by important subgroups. For example, in project 1 above, compare wages of heavy drinkers, light drinkers and non-drinkers.
- When looking for a template of what a paper should look like, both in structure, context, and visually, use the academic readings from class as a guide. Look at the papers we've read in class for a guide about how to construct a table.