KING'S COLLEGE LONDON
(University of London)

King's Business School

6SSMN961: APPLIED ECONOMETRICS

2019-20

Problem Set 5

1. Download the data *deaths.dta* from the course page. This dataset contains data on mortality rates for different age groups across US states in the period from 1970 to 1983. The variable *legal1820* is a measure of *exposure*, capturing the proportion of 18-20 year olds that are allowed to drink.
    a. Run a differences-in-differences regression to capture the effect of the Minimum Legal Drinking Age (MLDA) on deaths for 18-20 year olds. Estimate the effect separately for different causes of death – all, motor vehicle accidents, suicide and internal.
    b. Under what assumption do the estimates in part (a) capture the causal effect of the MLDA on youth deaths?
    c. Repeat the analysis in part (a) using population weights. What would be the reason for using Weighted Least Squares? How do the estimates change when you use weights?
    d. Repeat the analysis in part (a) including a state-specific time trend. How does this affect the results?
    e. You may be concerned that part of the effect of the MLDA is capturing changes in alcohol taxes. Repeat the analysis in parts (a) and (d) controlling for beer taxes. How does this affect the results?
    f. Repeat the analysis in part (a) but change the outcome variable to focus on deaths for 15-17 year olds and 21-24 year olds. Explain how the results for these two groups can be used as a check on the DD identification strategy.