

R Project - Replicating ADH Regressions

Ulrich Bergmann

Lachlan Deer

Let's first load the necessary packages to read data and do fancy regressions:

```
library("readr")
library("tibble")
library("sandwich")
library("lmtest")
```

And let's load the data like we always do:

```
df = read_csv("data/adh_data.csv")
```

1. OLS regression

The core of the paper is looking at what happened to laborer's when there's an increase in us imports from china. Let's try and replicate part of Table 9 - namely the estimate from panel A column 2.

Their y variable is `relchg_avg_hhincwage_pc_pw`. The important x variable is decadal trade between the us and china `d_tradeusch_pw`.

1. Run that simple regression
2. Now add heteroskedasticity robust standard (HC1). Hint: Use the `sandwich` and `lmtest` packages

Now we will start to add extra x variables.

3. Start by adding `t2` - a dummy variable for whether observation is in the second decade. Fit again with HC1 robust standard errors.

2. Clustering

Let us now use clustertered standard errors instead. ADH cluster by `statefip`. Hint: use the `felm` package.

1. Run the basic regression with clustering
2. Add the following controls to your last regression:
 - `l_shind_manuf_cbp`
 - `l_sh_popedu_c`
 - `l_sh_popfborn`
 - `l_sh_empl_f`
 - `l_sh_routine33`
 - `l_task_outsource`
3. Add region fixed effects to your regression.
 - First find all variables in the dataset that start with `reg_`
 - Add these to your last regression

3. Instrument Variables

1. Instrument `d_tradeusch_pw` with `d_tradeotch_pw_lag` in your last regression
2. Weight your regression by `timepwt48`