

### **ECO3211 Problem Set 3**

#### **Difference-in-Differences Estimation**

Use the 2010-2016 China Family Panel Studies to evaluate the judicial reforms in China.

Institutional background: In July 2014, the SPC issued its Fourth Five Year Judicial Reform Plan (2014-2018), marking the beginning of a new round of judicial reforms for the next five years. Provinces reformed the judicial system on a trial basis, the reform year for each province is present in Table 1.

Table 1. Timing of Judicial Reforms in China

Province Code	Province	Reform Year
11	Beijing	2016
12	Tianjin	2016
13	Hebei	2016
14	Shanxi	2015
15	Inner Mongolia	2015
21	Liaoning	2016
22	Jilin	2014
23	Heilongjiang	2015
31	Shanghai	2014
32	Jiangsu	2015
33	Zhejiang	2015
34	Anhui	2015
35	Fujian	2015
36	Jiangxi	2016
37	Shandong	2015
41	Henan	2016
42	Hubei	2014
43	Hunan	2016
44	Guangdong	2014
45	Guangxi	2016
46	Hainan	2014
50	Chongqing	2015
51	Sichuan	2016
52	Guizhou	2014
53	Yunnan	2015
54	Tibet	2016
61	Shaanxi	2016
62	Gansu	2016
63	Qinghai	2014
64	Ningxia	2015
65	Xinjiang	2016

Research question: how does the judicial reforms in China affect citizen's evaluation of local government?

1. Append the judicature data sets (judicature\_2010.dta; judicature\_2012.dta; judicature\_2014.dta; judicature\_2016.dta), merge the judicature data with provincial characteristics in 2010 (province.dta) according to current registration province (hk\_now\_prov).
2. Based on the reform years in Table 1 and current registration province, generate the variable of reform timing for all individuals.
3. Define the Treatment dummy (Treat), Post dummy (Post), and the interaction term (Treat\_Post)
4. Validity test of DID:
  - A. Provide some anecdotal evidences to support the validity of DID
  - B. Check whether the provincial population (population), government revenue (revenue), government expenditure (expenditure), number of high school students (highschool), rural per capita income (rural\_inc), urban disposable income (urban\_inc) can predict the timing of the reform.
5. Use DID estimation to check the impacts of judicial reforms on citizen's evaluation of local government (governwork), try the general DID specification, DID specification controlling for significant determinants of reform, DID specification controlling for province time trend. Compare the results from different DID specifications.
6. Check the common trends assumption and interpret your findings.

Notes: Assignment 3 will due on **Nov 28 23:59, 2020**. You should upload three separate documents electronically: one that contains your typed answers to the problem set questions, one well-organized and well-commented Stata do file, and one Stata log file.