```
/*==============================================================================

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Date: 6th May 2023

Task: Code of EC2C1 Final Report on Political Competition, Policy and Growth


==============================================================================*/


clear all
set more off, perm
cap log close                   // close any log file in use

log using "55027_project.log", replace text


* Markers may have to change this codeblock
cd "C:\Users\Neha\Downloads\Metrics-Project\Option2"

use "C:\Users\Neha\Downloads\Metrics-Project\Option2\project2.dta", clear




*For producing results in Table1

reg share_taxes_inc compnorm i.stcode i.year, cluster(stcode)
reg share_cap_exp   compnorm i.stcode i.year, cluster(stcode)
reg rtw             compnorm i.stcode i.year, cluster(stcode)

reg share_taxes_inc compnorm i.stcode i.year so#i.year, cluster(stcode)
reg share_cap_exp   compnorm i.stcode i.year so#i.year, cluster(stcode)
reg rtw             compnorm i.stcode i.year so#i.year, cluster(stcode)

ivregress 2sls share_taxes_inc i.stcode i.year (compnorm = coreiv), cluster(stcode)
ivregress 2sls share_cap_ex    i.stcode i.year (compnorm = coreiv), cluster(stcode)
ivregress 2sls rtw             i.stcode i.year (compnorm = coreiv), cluster(stcode)

*For producing results in Table 2
reg share_taxes_inc compnorm gip demcontrol repcontrol so#i.year i.stcode i.year, cluster(stcode)
reg share_cap_exp   compnorm gip demcontrol repcontrol so#i.year i.stcode i.year, cluster(stcode)
reg rtw             compnorm gip demcontrol repcontrol so#i.year i.stcode i.year, cluster(stcode)

*reg share_taxes_inc compnorm gip demcontrol repcontrol normdem so#i.year i.stcode i.year,
cluster(stcode)
*reg share_cap_exp   compnorm gip demcontrol repcontrol normdem so#i.year i.stcode i.year,
cluster(stcode)
*reg rtw             compnorm gip demcontrol repcontrol normdem so#i.year i.stcode i.year,
cluster(stcode)

reg share_taxes_inc demcomp repcomp gip demcontrol repcontrol so#i.year i.stcode i.year, cluster(
stcode)
reg share_cap_exp   demcomp repcomp gip demcontrol repcontrol so#i.year i.stcode i.year, cluster(
stcode)
reg rtw             demcomp repcomp gip demcontrol repcontrol so#i.year i.stcode i.year, cluster(
stcode)

*reg share_taxes_inc com1 com2 com3 gip demcontrol repcontrol normdem so#i.year i.stcode i.year,
cluster(stcode)
*reg share_cap_exp   com1 com2 com3 gip demcontrol repcontrol normdem so#i.year i.stcode i.year,
```

```
    cluster(stcode)
57  *reg rtw             com1 com2 com3 gip demcontrol repcontrol normdem so#i.year i.stcode i.year,
    cluster(stcode)
58
59
60  *reg share_taxes_inc compnorm gip demcontrol repcontrol i.stcode i.year if so==1, cluster(stcode)
61  *reg share_cap_exp   compnorm gip demcontrol repcontrol so#i.year i.stcode i.year if so==1,
    cluster(stcode)
62  *reg rtw             compnorm gip demcontrol repcontrol so#i.year i.stcode i.year if so==1,
    cluster(stcode)
63
64  *reg share_taxes_inc compnorm gip demcontrol repcontrol i.stcode i.year if so == 0, cluster(stcode)
65  *reg share_cap_exp   compnorm gip demcontrol repcontrol so#i.year i.stcode i.year if so == 0,
    cluster(stcode)
66  *reg rtw             compnorm gip demcontrol repcontrol so#i.year i.stcode i.year if so == 0,
    cluster(stcode)
67
68  * Columns 7 and
69  preserve
70
71  keep if year>=1950 & year<=1999
72  gen e = floor(year/5)
73  tostring e, gen(ex)
74  gen groupid = code + ex
75
76  bysort groupid: egen fiveyravg_share_taxes_inc = mean(share_taxes_inc)
77  bysort groupid: egen fiveyravg_share_cap_exp   = mean(share_cap_exp)
78  bysort groupid: egen fiveyravg_compnorm        = mean(compnorm)
79  bysort groupid: egen fiveyravg_gip             = mean(gip)
80  bysort groupid: egen fiveyravg_demcontrol      = mean(demcontrol)
81  bysort groupid: egen fiveyravg_repcontrol      = mean(repcontrol)
82
83  reg fiveyravg_share_taxes_inc fiveyravg_compnorm fiveyravg_gip fiveyravg_demcontrol
    fiveyravg_repcontrol i.stcode i.year so#i.year, cluster(stcode)
84  reg fiveyravg_share_cap_exp   fiveyravg_compnorm fiveyravg_gip fiveyravg_demcontrol
    fiveyravg_repcontrol i.stcode i.year so#i.year, cluster(stcode)
85
86  restore
87
88  * Column 9
89  preserve
90
91  keep if year>=1932 & year<=2001
92  gen e = floor(year/5)
93  tostring e, gen(ex)
94  gen groupid = code + ex
95
96  bysort groupid: egen fiveyravg_rtw             = mean(rtw)
97  bysort groupid: egen fiveyravg_compnorm        = mean(compnorm)
98  bysort groupid: egen fiveyravg_gip             = mean(gip)
99  bysort groupid: egen fiveyravg_demcontrol      = mean(demcontrol)
100 bysort groupid: egen fiveyravg_repcontrol      = mean(repcontrol)
101
102 reg fiveyravg_rtw fiveyravg_compnorm fiveyravg_gip fiveyravg_demcontrol fiveyravg_repcontrol i.stcode
     i.year so#i.year, cluster(stcode)
103
104 restore
105
106
107 *For producing results in Table3
108
109 reg gstinc compnorm llstinc i.stcode i.year, cluster(stcode)
110 reg gstinc compnorm llstinc i.stcode i.year so#i.year, cluster(stcode)
```

```
111  ivregress 2sls gstinc llstinc i.stcode i.year (compnorm = coreiv), cluster(stcode)
112  ivregress 2sls gstinc llstinc i.stcode i.year so#i.year (compnorm = coreiv), cluster(stcode)
113
114
115  *reg gstinc compnorm gip demcontrol repcontrol llstinc so#i.year i.stcode i.year, cluster(stcode)
116  *reg gstinc compnorm gip demcontrol repcontrol normdem llstinc so#i.year i.stcode i.year,
     cluster(stcode)
117  *reg gstinc demcomp repcomp gip demcontrol repcontrol llstinc so#i.year i.stcode i.year,
     cluster(stcode)
118  *reg gstinc com1 com2 com3 gip demcontrol repcontrol normdem llstinc so#i.year i.stcode i.year,
     cluster(stcode)
119
120
121  *reg gstinc compnorm gip demcontrol repcontrol llstinc so#i.year i.stcode i.year if so == 1,
     cluster(stcode)
122  *reg gstinc compnorm gip demcontrol repcontrol llstinc so#i.year i.stcode i.year if so == 0,
     cluster(stcode)
123  *reg non_farm_share compnorm gip demcontrol repcontrol i.stcode i.year so#i.year if year>=1929 and
     year<=2000, cluster(stcode)
124
125
126  *For producing results in Table4
127  ivregress 2sls gstinc llstinc i.stcode i.year (share_taxes_inc = compnorm), cluster(stcode)
128  ivregress 2sls gstinc llstinc i.stcode i.year (share_cap_exp = compnorm), cluster(stcode) level(90)
129  ivregress 2sls gstinc llstinc i.stcode i.year (rtw = compnorm), cluster(stcode) level(90)
130
131  *For checking the t-stat values from first-stage regression (checking IV model assumptions)
132  reg share_taxes_inc    compnorm llstinc i.stcode i.year, cluster(stcode)
133  reg share_cap_exp   compnorm llstinc i.stcode i.year, cluster(stcode)
134  reg rtw    compnorm llstinc i.stcode i.year, cluster(stcode)
135
136
137  *For producing results in Table5
138  reg share_taxes_inc compnorm i.stcode i.year [aweight=pop], cluster(stcode)
139  reg share_cap_exp   compnorm i.stcode i.year [aweight=pop], cluster(stcode)
140  reg rtw             compnorm i.stcode i.year [aweight=pop], cluster(stcode)
141
142  *To check if more populous states have an effect on share_cap_exp which is opposite from the effect
     observed nationally
143  reg share_cap_exp   compnorm i.stcode i.year if stcode == 4 | stcode == 8 | stcode == 30 | stcode ==
     41
144
145
146
147
148
149  ***Testing the parallel trends assumption
150
151  *Time trend of political competition (figure 1(d))
152
153  preserve
154
155  tostring so, gen(sostr)
156  tostring year, gen(yearstr)
157
158  gen groupid = sostr + yearstr
159  bysort groupid: egen avg_compnorm   = mean(compnorm)
160  duplicates drop groupid, force
161
162  keep year so avg_compnorm
163  reshape wide avg_compnorm, i(year) j(so)
164  drop if missing(avg_compnorm0)
165
```

```
166  line avg_compnorm0 avg_compnorm1 year, legend(size(medsmall)) ytitle(Political Competition) xtitle(
     Year) legend(label(1 "Northern States") label(2 "Southern States"))
167  graph export dd_validity_compnorm.jpg, quality(100)
168
169  restore
170
171  *Time trend of share_taxes_inc (figure 1(b))
172
173  preserve
174
175  tostring so, gen(sostr)
176  tostring year, gen(yearstr)
177
178  gen groupid = sostr + yearstr
179  bysort groupid: egen avg_share_taxes_inc   = mean(share_taxes_inc)
180  duplicates drop groupid, force
181
182  keep year so avg_share_taxes_inc
183  reshape wide avg_share_taxes_inc, i(year) j(so)
184  drop if missing(avg_share_taxes_inc0)
185
186  line avg_share_taxes_inc0 avg_share_taxes_inc1 year, legend(size(medsmall)) tline(1965) ytitle(Tax
     revenue as % of state income) xtitle(Year) legend(label(1 "Northern States") label(2 "Southern
     States"))
187  graph export dd_validity_avg_shares_taxes_inc.jpg, quality(100)
188
189  restore
190
191  *Time trend of share_cap_exp (figure 1(a))
192
193  preserve
194
195  tostring so, gen(sostr)
196  tostring year, gen(yearstr)
197
198  gen groupid = sostr + yearstr
199  bysort groupid: egen avg_share_cap_exp  = mean(share_cap_exp)
200  duplicates drop groupid, force
201
202  keep year so avg_share_cap_exp
203  reshape wide avg_share_cap_exp, i(year) j(so)
204  drop if missing(avg_share_cap_exp0)
205
206  line avg_share_cap_exp0 avg_share_cap_exp1 year, legend(size(medsmall)) tline(1965) ytitle(Infra.
     spending as a % of state govt. exp.) xtitle(Year) legend(label(1 "Northern States") label(2
     "Southern States"))
207  graph export dd_validity_avg_share_cap_exp.jpg, quality(100)
208
209  restore
210
211  *Time trend of rtw (figure 1(c))
212
213  preserve
214
215  tostring so, gen(sostr)
216  tostring year, gen(yearstr)
217
218  gen groupid = sostr + yearstr
219  bysort groupid: egen avg_rtw   = mean(rtw)
220  duplicates drop groupid, force
221
222  keep year so avg_rtw
223  reshape wide avg_rtw, i(year) j(so)
```

```
224  drop if missing(avg_rtw0)
225
226  line avg_rtw0 avg_rtw1 year, legend(size(medsmall)) tline(1965) ytitle(Right to work laws) xtitle(
     Year) legend(label(1 "Northern States") label(2 "Southern States"))
227  graph export dd_validity_avg_rtw.jpg, quality(100)
228
229  restore
230
231
232
233  *Time trend of gstinc ( not used in the final submission)
234
235  preserve
236
237  tostring so, gen(sostr)
238  tostring year, gen(yearstr)
239
240  gen groupid = sostr + yearstr
241  bysort groupid: egen avg_gstinc   = mean(gstinc)
242  duplicates drop groupid, force
243
244  replace avg_gstinc = avg_gstinc*100
245
246  keep year so avg_gstinc
247  reshape wide avg_gstinc, i(year) j(so)
248  drop if missing(avg_gstinc0)
249
250  line avg_gstinc0 avg_gstinc1 year, legend(size(medsmall)) tline(1965) ytitle(Growth(in %) of personal
      income) xtitle(Year) legend(label(1 "Northern States") label(2 "Southern States"))
251  graph export dd_validity_avg_gstinc.jpg, quality(100)
252
253  restore
254
255
256  *Extension2 (including state specific trends) (a potential success)
257
258  *reg share_taxes_inc compnorm i.stcode i.year i.stcode#c.year, cluster(stcode)
259  *reg share_cap_exp   compnorm i.stcode i.year i.stcode#c.year, cluster(stcode)
260  *reg rtw             compnorm i.stcode i.year i.stcode#c.year, cluster(stcode)
261
262
263
264
265  log off
```