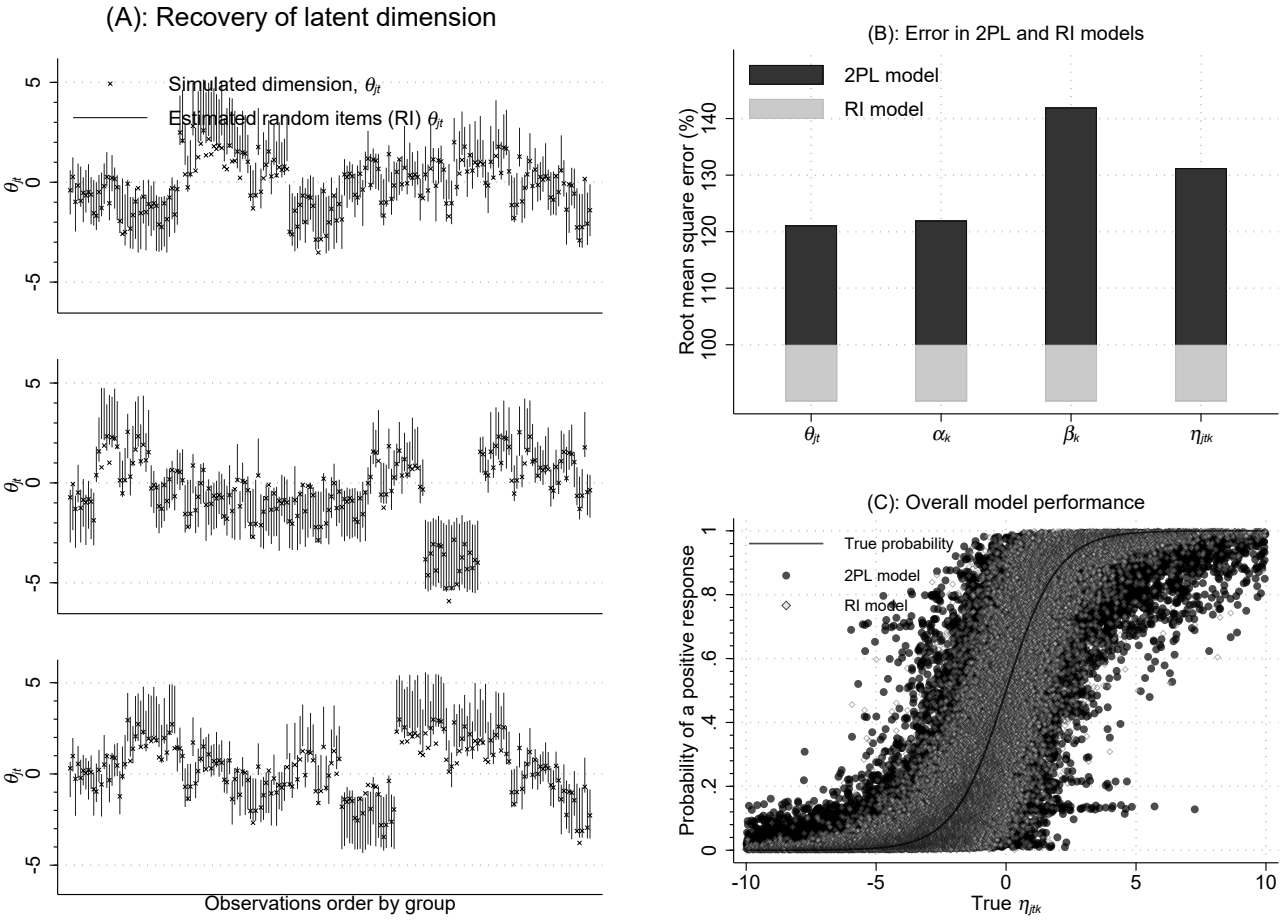
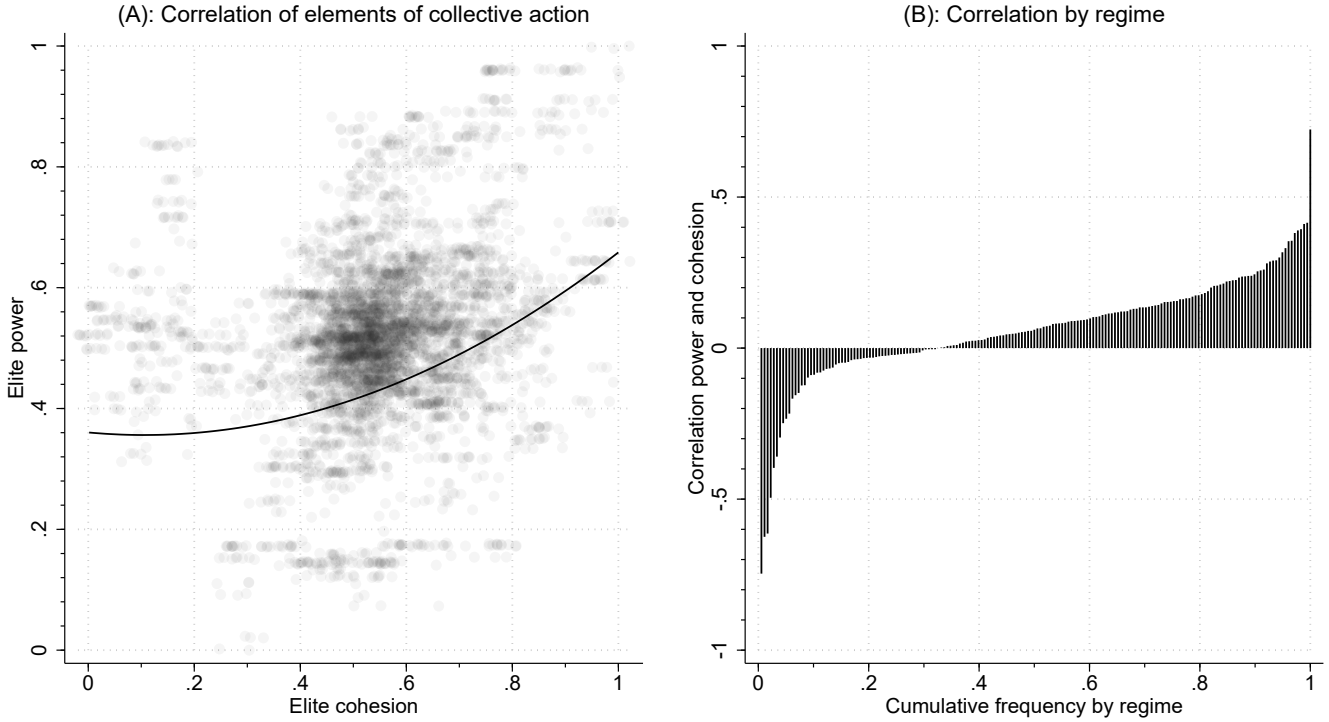
```
------------------------------------------------------------------------------------------
> --------------------
      name:  <unnamed>
       log:  C:\Users\josek\Documents\Research\ECA paper\Replication materials\PSRM replic
> ation\replicationlog.log
  log type:  text
 opened on:   5 Aug 2022, 14:55:39
.
. /*Replication of "Can't coalesce, can't constrain: Redefining elite influence in non-dem
> ocracies"JosÃ© Kaire7/16/2022*/
.
. cd "C:\Users\josek\Documents\Research\ECA paper\Replication materials\PSRM replication"
C:\Users\josek\Documents\Research\ECA paper\Replication materials\PSRM replication
.
. global format1 graphregion(color(white))  ylabel(, glcolor(gs12) glpattern(dot)) ymtick(
> ##5) xlabel(, grid glcolor(gs12) glpattern(dot) ) xmtick(##5)
.
.
. **Figure 2: Simulation results graph
. *Panel A
. import delimited "https://github.com/josekaire/ecapaper/raw/main/theta_recovery_random_i
> tems.csv", clear
(9 vars, 2,100 obs)
. gen id= _n
. gen odd = mod(id,2)
. gen marker=.
(2,100 missing values generated)
.
. twoway  (rspike lower90 upper90 id, lcolor(black%90) lwidth(vvthin))  (rspike marker mar
> ker  id, lcolor(black%90) lwidth(thin)) (scatter simulatedtheta id, msize(small) msymbol
> (X) mcolor(black) lcolor(%.40) mlwidth(vthin))  if odd==1&id<400, xsize(6.5) name(g400,
> replace) legend(order (3 "Simulated dimension, {it:{&theta}{sub:jt}}" 2 "Estimated rando
> m items (RI) {it:{&theta}{sub:jt}}") col(1) ring(0) position(11) bmargin(small) region(f
> color(%0) lcolor(white%0))) $format1 xlabel(none) xtitle("") xmtick(none) ytitle("{it:{&
> theta}{sub:jt}}")
.
. twoway  (rspike lower90 upper90 id, lcolor(black%90) lwidth(vvthin))  (scatter simulated
> theta id, msize(small) msymbol(X) mcolor(black) lcolor(%.40) mlwidth(vthin)) if odd==1&i
> d<800&id>400, xsize(6.5) name(g800, replace) legend(off)  $format1  xlabel(none) xtitle(
> "") xmtick(none) ytitle("{it:{&theta}{sub:jt}}")
.
. twoway  (rspike lower90 upper90 id, lcolor(black%90) lwidth(vvthin))  (scatter simulated
> theta id, msize(small) msymbol(X) mcolor(black) lcolor(%.40) mlwidth(vthin)) if odd==1&i
> d<1200&id>800, xsize(6.5) name(g1200, replace) $format1 legend(off) xlabel(none) xtitle(
> "Observations order by group") xmtick(none) ytitle("{it:{&theta}{sub:jt}}")
.
. graph combine g400 g800 g1200, ycommon col(1) name(panelA, replace) graphregion(color(wh
> ite)) title("(A): Recovery of latent dimension", col(black) size(medsmall))
.
. *Panel B
. import delimited "https://github.com/josekaire/ecapaper/raw/main/rmse.csv", clear
(6 vars, 12 obs)
. replace index=4 if parameter=="eta"
(2 real changes made)
. encode parameter, gen(param)
. gen wrmse=(rmse/weight)*100
```

```
. twoway (bar wrmse index if parameter=="theta"&model=="m2pl", fcol("black") lcol(black%70
> ) barwidth(.4)) (bar wrmse index if parameter=="theta"&model=="mRI", col("gs10") fcolor(
> *.7) lcolor(gs10*.7) barwidth(.4)) /// (bar wrmse index if parameter=="alpha"&model=="m2
> pl", fcol("black") lcol(black%70) barwidth(.4)) (bar wrmse index if parameter=="alpha"&m
> odel=="mRI", col("gs10") fcolor(*.7) lcolor(gs10*.7) barwidth(.4)) ///  (bar wrmse index
> if parameter=="beta"&model=="m2pl", fcol("black") lcol(black%70) barwidth(.4)) (bar wrms
> e index if parameter=="beta"&model=="mRI", col("gs10") fcolor(*.7) lcolor(gs10*.7) barwi
> dth(.4)) ///        (bar wrmse index if parameter=="eta"&model=="m2pl", fcol("black") lc
> ol(black%70) barwidth(.4)) (bar wrmse index if parameter=="eta"&model=="mRI", col("gs10"
> ) fcolor(*.7) lcolor(gs10*.7) barwidth(.4)), legend(order (1 "2PL model" 2 "RI model") c
> ol(1) ring(0) position(11) bmargin(small) region(fcolor(%0) lcolor(white%0))) $format1 t
> itle("(B): Error in 2PL and RI models", col(black) size(medsmall))xmtick(none) ymtick(no
> ne)   yscale(range(90 150)) ytitle("Root mean square error (%)")   xlabel( 1 "{it:{&thet
> a}{sub:jt}}" 2 "{it:{&alpha}{sub:k}}" 3 "{it:{&beta}{sub:k}}" 4 "{it:{&eta}{sub:jtk}}")
> xtitle("") xscale(range(.5 4.5)) name(rmse, replace)
.
. *Panel C
. import delimited "https://github.com/josekaire/ecapaper/raw/main/eta_recovery.csv", clea
> r
(4 vars, 21,000 obs)
. gen marker=.
(21,000 missing values generated)
. sort simulated
. gen invsimulated=invlogit(simulated)
. gen invm1=invlogit(pleta)
. gen invm2=invlogit(ranitemeta)
.
. twoway (scatter  invm1 simulatedeta, msymbol(o) mlcolor(black%0) mcolor(black%70))(scatt
> er  invm2 simulatedeta, msize(small) mcolor(gs16%20) mlcolor(black%30) mlwidth(vvthin) m
> symbol(d)) (scatter marker simulatedeta, mcolor(gs13%50) mlcolor(black%70) mlwidth(vvthi
> n) msymbol(d))(line invsimulated simulated, lcolor(black%70)) if simulated>-10&simulated
> <10, title("(C): Overall model performance", col(black) size(medsmall))ytitle("Probabili
> ty of a positive response") xtitle("True {it:{&eta}{sub:jtk}}") $format1 legend(size(sma
> ll) order (4 "True probability" 1 "2PL model" 3 "RI model" ) col(1) ring(0) position(11)
> bmargin(small) region(fcolor(%0) lcolor(white%0))) xscale(range(-8 8)) xmtick(none) name
> (etarecover, replace)
.
. graph combine rmse etarecover, name(BandC, replace) col(1) graphregion(color(white))
. graph combine panelA BandC, graphregion(color(white))
. graph export figure2.pdf, replace
(file figure2.pdf written in PDF format)
```




```
.
. *Figure 3: Correlation of power-sharing and cohesion
. use  "https://github.com/josekaire/ecapaper/raw/main/Replication%20data.dta", clear
. twoway (scatter dps bpscondensed , mcolor("gs3") mfcolor(%5) mlcolor(%0)) (qfit dps bps,
> lcolor("black")) if bps>0, graphregion(color(white))  ylabel(, glcolor(gs12) glpattern(d
> ot) nogextend) ymtick(##5) xlabel(, grid glcolor(gs12) glpattern(dot) nogextend) xmtick(
> ##2)  ytitle("Elite power") xtitle("Elite cohesion") legend(off) title("(A): Correlation
> of elements of collective action", color("black") size("medium")) name(pooled, replace)
.
. preserve
. import delimited "https://github.com/josekaire/ecapaper/raw/main/power%20and%20cohesion%
> 20correlation%20by%20country.csv", varnames(1) clear
(4 vars, 204 obs)
. destring rhos uniques sds, replace ignore(‘"NA"’)
rhos: characters N A removed; replaced as double
(26 missing values generated)
uniques: characters N A removed; replaced as double
(26 missing values generated)
sds: characters N A removed; replaced as double
(26 missing values generated)
. drop if rhos==.
(26 observations deleted)
. gen weighted=rhos*(uniques)
. sort weighted
. gen id=_n
. gen cumfreq = id/_N
```

```
. twoway spike weighted cumfreq, lcolor("black")  graphregion(color(white))  ylabel(, glco
> lor(gs12) glpattern(dot) nogextend) ymtick(##5) xlabel(, grid glcolor(gs12) glpattern(do
> t) nogextend) xmtick(##2)  ytitle("Correlation power and cohesion") xtitle("Cumulative f
> requency by regime") title("(B): Correlation by regime", color("black") size("medium"))
> name(byregime, replace)
. restore
.
. graph combine pooled byregime ,  graphregion(color(white)) name(eca, replace) col(2) xsi
> ze(7)
. graph export figure3.pdf, replace
(file figure3.pdf written in PDF format)
```

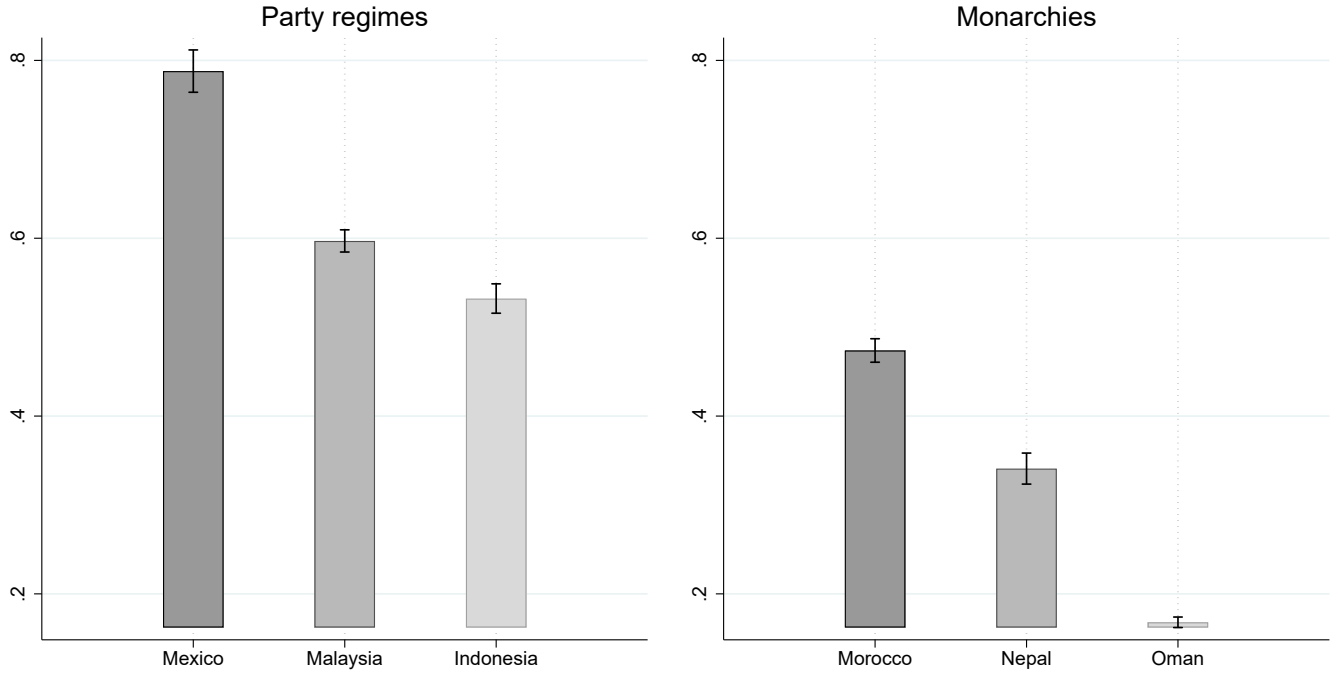



```
.
. *Figure 4: ECA within reigme types
. **Variations within type
. reg eca  if country=="Mexico"&year>1957
      Source |       SS           df       MS      Number of obs   =        43
-------------+----------------------------------   F(0, 42)        =      0.00
       Model |           0         0           .   Prob > F        =         .
    Residual |  .251408894        42  .005985926   R-squared       =    0.0000
-------------+----------------------------------   Adj R-squared   =    0.0000
       Total |  .251408894        42  .005985926   Root MSE        =    .07737
------------------------------------------------------------------------------
         eca |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .7879966   .0117986    66.79   0.000      .764186    .8118072
------------------------------------------------------------------------------
```

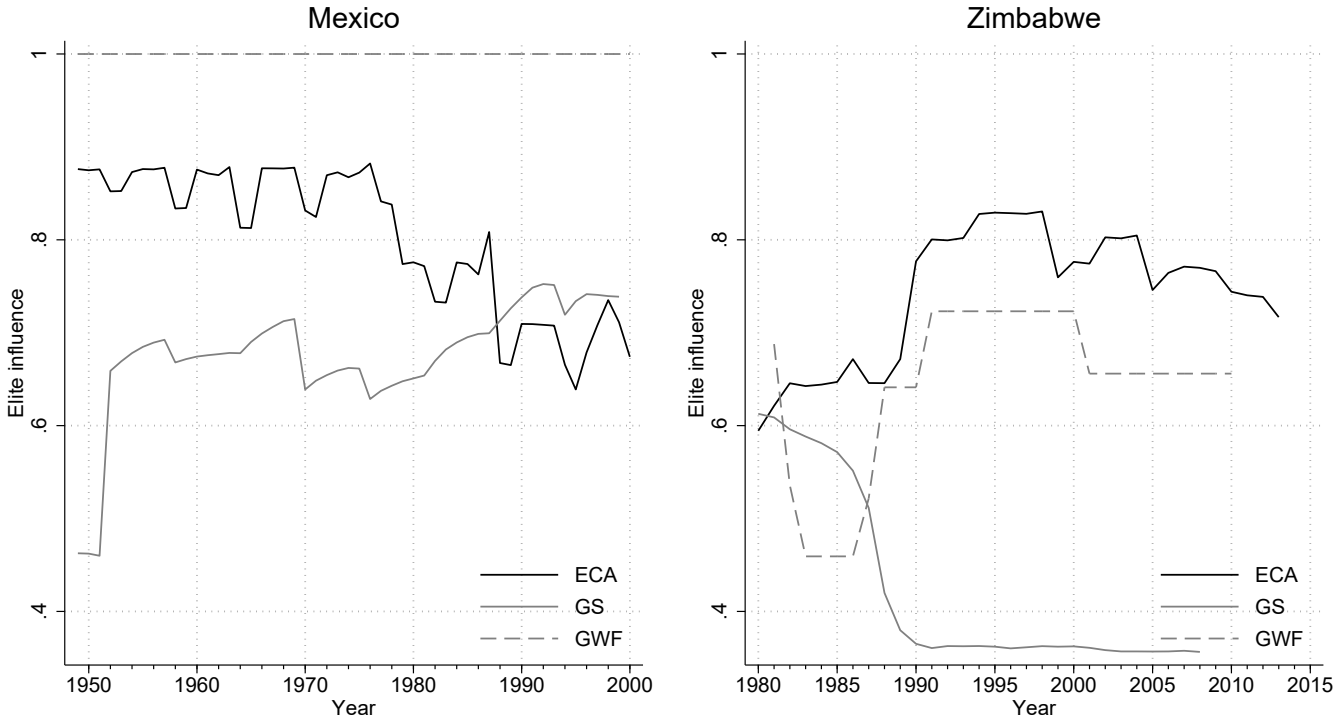
```
. margins,  post
Predictive margins                              Number of obs     =         43
Model VCE    : OLS
Expression   : Linear prediction, predict()
------------------------------------------------------------------------------
             |            Delta-method
             |     Margin   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .7879966   .0117986    66.79   0.000      .764186    .8118072
------------------------------------------------------------------------------
. estimates store mex
. reg eca  if country=="Malaysia"&year>1957
      Source |       SS           df       MS      Number of obs   =        56
-------------+----------------------------------   F(0, 55)        =      0.00
       Model |           0         0           .   Prob > F        =         .
    Residual |  .119602445        55   .00217459   R-squared       =    0.0000
-------------+----------------------------------   Adj R-squared   =    0.0000
       Total |  .119602445        55   .00217459   Root MSE        =    .04663
------------------------------------------------------------------------------
         eca |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .5969732   .0062315    95.80   0.000     .5844849    .6094614
------------------------------------------------------------------------------
. margins,  post
Predictive margins                              Number of obs     =         56
Model VCE    : OLS
Expression   : Linear prediction, predict()
------------------------------------------------------------------------------
             |            Delta-method
             |     Margin   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .5969732   .0062315    95.80   0.000     .5844849    .6094614
------------------------------------------------------------------------------
. estimates store mal
. reg eca  if country=="Indonesia"&year>1957
      Source |       SS           df       MS      Number of obs   =        42
-------------+----------------------------------   F(0, 41)        =      0.00
       Model |           0         0           .   Prob > F        =         .
    Residual |  .115371029        41  .002813928   R-squared       =    0.0000
-------------+----------------------------------   Adj R-squared   =    0.0000
       Total |  .115371029        41  .002813928   Root MSE        =    .05305
------------------------------------------------------------------------------
         eca |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .5321822   .0081852    65.02   0.000     .5156517    .5487126
------------------------------------------------------------------------------
. margins,  post
Predictive margins                              Number of obs     =         42
Model VCE    : OLS
Expression   : Linear prediction, predict()
------------------------------------------------------------------------------
             |            Delta-method
             |     Margin   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .5321822   .0081852    65.02   0.000     .5156517    .5487126
------------------------------------------------------------------------------
. estimates store indo
```

```
. reg eca  if country=="Morocco"&year>1955
      Source |       SS           df       MS      Number of obs   =        58
-------------+----------------------------------   F(0, 57)        =      0.00
       Model |           0         0           .   Prob > F        =         .
    Residual |  .143431306        57  .002516339   R-squared       =    0.0000
-------------+----------------------------------   Adj R-squared   =    0.0000
       Total |  .143431306        57  .002516339   Root MSE        =    .05016
------------------------------------------------------------------------------
         eca |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .4737524   .0065867    71.93   0.000     .4605626    .4869421
------------------------------------------------------------------------------
. margins,  post
Predictive margins                              Number of obs     =         58
Model VCE    : OLS
Expression   : Linear prediction, predict()
------------------------------------------------------------------------------
             |            Delta-method
             |     Margin   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .4737524   .0065867    71.93   0.000     .4605626    .4869421
------------------------------------------------------------------------------
. estimates store mor
. reg eca  if country=="Oman"&year>1955
      Source |       SS           df       MS      Number of obs   =        43
-------------+----------------------------------   F(0, 42)        =      0.00
       Model |           0         0           .   Prob > F        =         .
    Residual |  .015476563        42   .00036849   R-squared       =    0.0000
-------------+----------------------------------   Adj R-squared   =    0.0000
       Total |  .015476563        42   .00036849   Root MSE        =     .0192
------------------------------------------------------------------------------
         eca |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .1680451   .0029274    57.40   0.000     .1621374    .1739528
------------------------------------------------------------------------------
. margins,  post
Predictive margins                              Number of obs     =         43
Model VCE    : OLS
Expression   : Linear prediction, predict()
------------------------------------------------------------------------------
             |            Delta-method
             |     Margin   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .1680451   .0029274    57.40   0.000     .1621374    .1739528
------------------------------------------------------------------------------
. estimates store oman
```

```
. reg eca  if country=="Nepal"&year>1955
      Source |       SS           df       MS      Number of obs   =        36
-------------+----------------------------------   F(0, 35)        =      0.00
       Model |           0         0           .   Prob > F        =         .
    Residual |  .093009071        35  .002657402   R-squared       =    0.0000
-------------+----------------------------------   Adj R-squared   =    0.0000
       Total |  .093009071        35  .002657402   Root MSE        =    .05155
------------------------------------------------------------------------------
         eca |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .3409086   .0085917    39.68   0.000     .3234666    .3583506
------------------------------------------------------------------------------
. margins,  post
Predictive margins                              Number of obs     =         36
Model VCE    : OLS
Expression   : Linear prediction, predict()
------------------------------------------------------------------------------
             |            Delta-method
             |     Margin   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       _cons |   .3409086   .0085917    39.68   0.000     .3234666    .3583506
------------------------------------------------------------------------------
. estimates store nep
.
. coefplot (mex,label("Mexico") col("black"))  (mal,label("Malaysia") col("gs5") ) (indo,l
> abel("Indonesia") col("gs10")), vertical recast(bar) barwidth(0.1)  fcolor(*.5)  ciopts(
> recast(rcap)col("black")) citop title("Party regimes", col("black")) graphregion(color(w
> hite))   xlabel( .75 "Mexico" 1 "Malaysia" 1.25 "Indonesia" ,grid glcolor(gs12) glpatter
> n(dot))  grid(between glcolor(orange) glpattern(dash)) legend(off) name(parties, replace
> )
.
. coefplot (mor,label("Morocco") col("black"))  (nep,label("Nepal") col("gs5") ) (oman,lab
> el("Oman") col("gs10")), vertical recast(bar) barwidth(0.1)  fcolor(*.5)  ciopts(recast(
> rcap)col("black")) citop title("Monarchies", col("black")) graphregion(color(white))   x
> label( .75 "Morocco" 1 "Nepal" 1.25 "Oman" ,grid glcolor(gs12) glpattern(dot))  grid(bet
> ween glcolor(orange) glpattern(dash)) legend(off)   name(monarchies, replace)
.
. graph combine parties monarchies, ycommon xsize(7.5)  graphregion(color(white))
. graph export figure4.pdf, replace
(file figure4.pdf written in PDF format)
```




```
.
. *Figure 5: Mexico Zimbabwe comparison
. qui twoway (tsline eca if ccode==70, lcolor(black)) /// (tsline gl if ccode==70, lcolor(
> gray)) /// (tsline gwf_ps if ccode==70, lcolor(gray) lpattern(dash)), /// graphregion(co
> lor(white)) ylabel(, glcolor(gs10) glpattern(dot)) xlabel(#8, grid glcolor(gs10) glpatte
> rn(dot)) xmtick(##5) xtitle("Year") ytitle("Elite influence") title("Mexico", color("bla
> ck"))  name(mex, replace)  legend(ring(0) position(5)  label(1 "ECA") label(2 "GS") labe
> l(3 "GWF") col(1) region(style(none)))
.
. qui twoway (tsline eca if ccode==552, lcolor(black)) /// (tsline gl if ccode==552, lcolo
> r(gray) ) /// (tsline gwf_ps if ccode==552, lcolor(gray) lpattern(dash)) if year>1979, g
> raphregion(color(white))  ylabel(, glcolor(gs10) glpattern(dot)) xlabel(#8, grid glcolor
> (gs10) glpattern(dot)) xmtick(##5) xtitle("Year") ytitle("Elite influence")  title("Zimb
> abwe", color("black")) name(zimb, replace) legend(ring(0) position(5) label(1 "ECA") lab
> el(2 "GS") label(3 "GWF") col(1) region(style(none)))
.
. graph combine mex zimb, xsize(7) ycommon  graphregion(color(white))
. graph export figure5.pdf, replace
(file figure5.pdf written in PDF format)
```

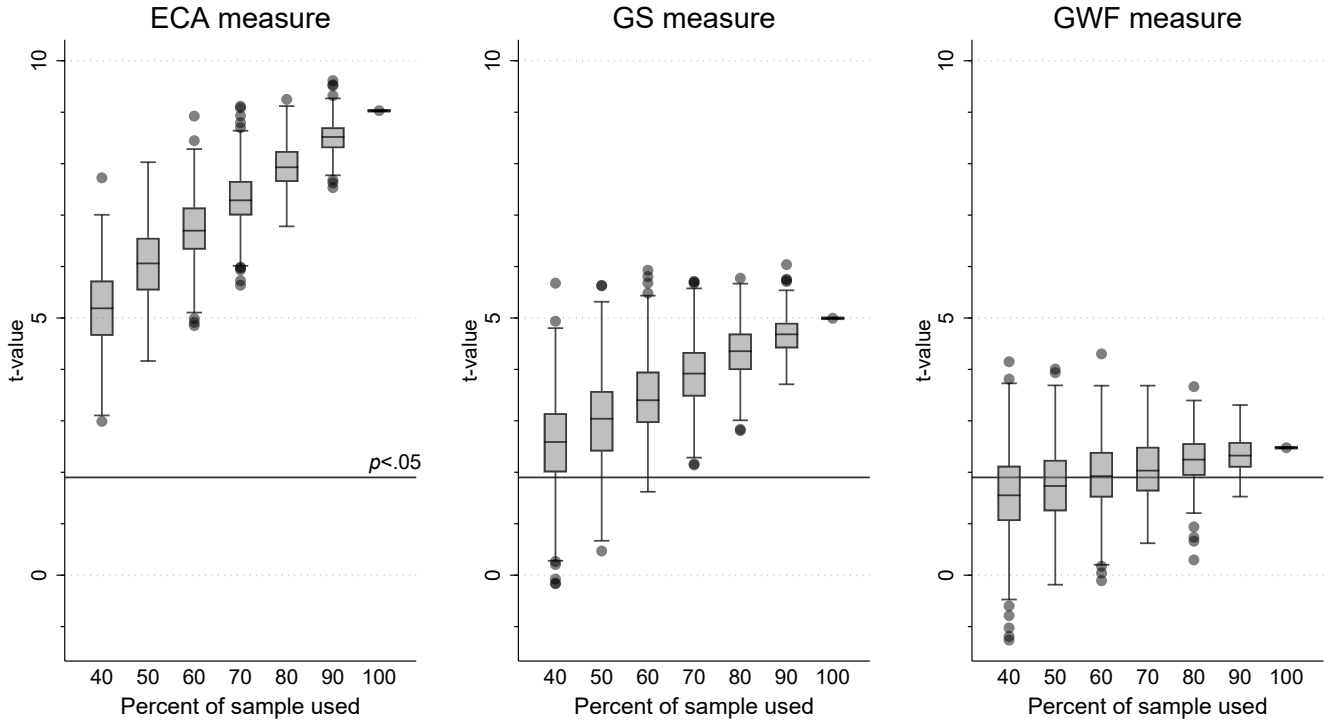



```
.
. *Table 4: Replication of Gehlbach and Keefer
. qui reg fdi4_gdp gov1_yrs tenure stabs fuelex_gdp oresex_gdp frac_ethn frac_relig frac_l
> ing pop_yng_pct pop_tot pop_ru_pct land_km gdppc_ppp_2005_us if eca!=., cluster(ifs)
.
.
. qui reg fdi4_gdp eca tenure stabs fuelex_gdp oresex_gdp frac_ethn frac_relig frac_ling p
> op_yng_pct pop_tot pop_ru_pct land_km gdppc_ppp_2005_us  if insample!=., cluster(ifs)
. estimates store m3
.
. qui reg fdi4_gdp gov1_yrs_std tenure stabs fuelex_gdp oresex_gdp frac_ethn frac_relig fr
> ac_ling pop_yng_pct pop_tot pop_ru_pct land_km gdppc_ppp_2005_us if eca!=., cluster(ifs)
. estimates store m2
.
. qui reg fdi4_gdp gov1_yrs_std tenure stabs fuelex_gdp oresex_gdp frac_ethn frac_relig fr
> ac_ling pop_yng_pct pop_tot pop_ru_pct land_km gdppc_ppp_2005_us, cluster(ifs)
. estimates store m1
.
```

```
. estout  m1 m2 m3,  label  cells(b(star fmt(2))& se(par fmt(2))) s(N r2)
------------------------------------------------------------------------
                              m1              m2              m3
                            b/se            b/se            b/se
------------------------------------------------------------------------
gov1_yrs_std          0.60 (1.26)    -0.86 (1.57)
Duration of non-de~o  0.03 (0.07)    -0.00 (0.08)     0.02 (0.08)
Intra-elite turnover -0.70 (2.04)    -1.75 (2.78)    -0.79 (2.61)
Fuel exports/GDP      0.05 (0.04)     0.07 (0.04)     0.07 (0.04)
Ore exports/GDP       0.05 (0.03)     0.05 (0.03)     0.06 (0.03)
Ethnic fractionali~n -1.95 (1.93)    -0.48 (1.80)    -0.36 (1.75)
Religious fraction~n  0.24 (1.68)    -0.85 (1.63)    -0.94 (1.68)
Linguistic fractio~n  1.74 (1.22)     1.32 (1.37)     1.05 (1.25)
Fraction populatio~o -0.13** (0.05)    -0.17** (0.06)    -0.18** (0.06)
Total Poplulation    -0.00 (0.00)     0.00 (0.00)     0.00 (0.00)
Fraction populatio~l -0.02 (0.03)    -0.01 (0.03)    -0.00 (0.03)
land area in 10,00~k -0.00 (0.00)    -0.00 (0.00)    -0.00 (0.00)
Real, PPP-adjusted~a -1.25 (0.74)    -1.37 (0.81)    -1.23 (0.80)
eca                                                  4.79* (2.41)
_cons                8.65** (2.78)    9.90** (3.48)     6.78 (3.89)
------------------------------------------------------------------------
N                           115.00           93.00           93.00
r2                            0.15            0.17            0.19
------------------------------------------------------------------------
.
. *Figure 6: Human rights and elite influence
. *Rescale Fariss measure
. sum hrs
    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
         hrs |      4,773   -.2525273    1.000976  -2.871188   3.899065
. gen HRS=hrs+abs(r(min))
(47 missing values generated)
. sum HRS
    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
         HRS |      4,773    2.618661    1.000976          0   6.770253
. replace HRS=HRS/r(max)
(4,772 real changes made)
. sum HRS
    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
         HRS |      4,773    .3867892    .1478492          0          1
. drop if sid2==.
(47 observations deleted)
. xtset sid2 year
       panel variable:  sid2 (unbalanced)
        time variable:  year, 1949 to 2013, but with a gap
                delta:  1 unit
. foreach var of varlist eca gl_ps gwf_ps {
  2.         forv j=4(1)10{
  3.                 forv i=1(1)500{
  4.                                 *Run regression
.                                 gen rng`i'=uniform()
  5.                                 qui xtreg HRS `var' gwf_pa gwf_mil gwf_mon if rng`i'<
> (`j'/10)
  6.                                 *Save coefficient/std error
.
```

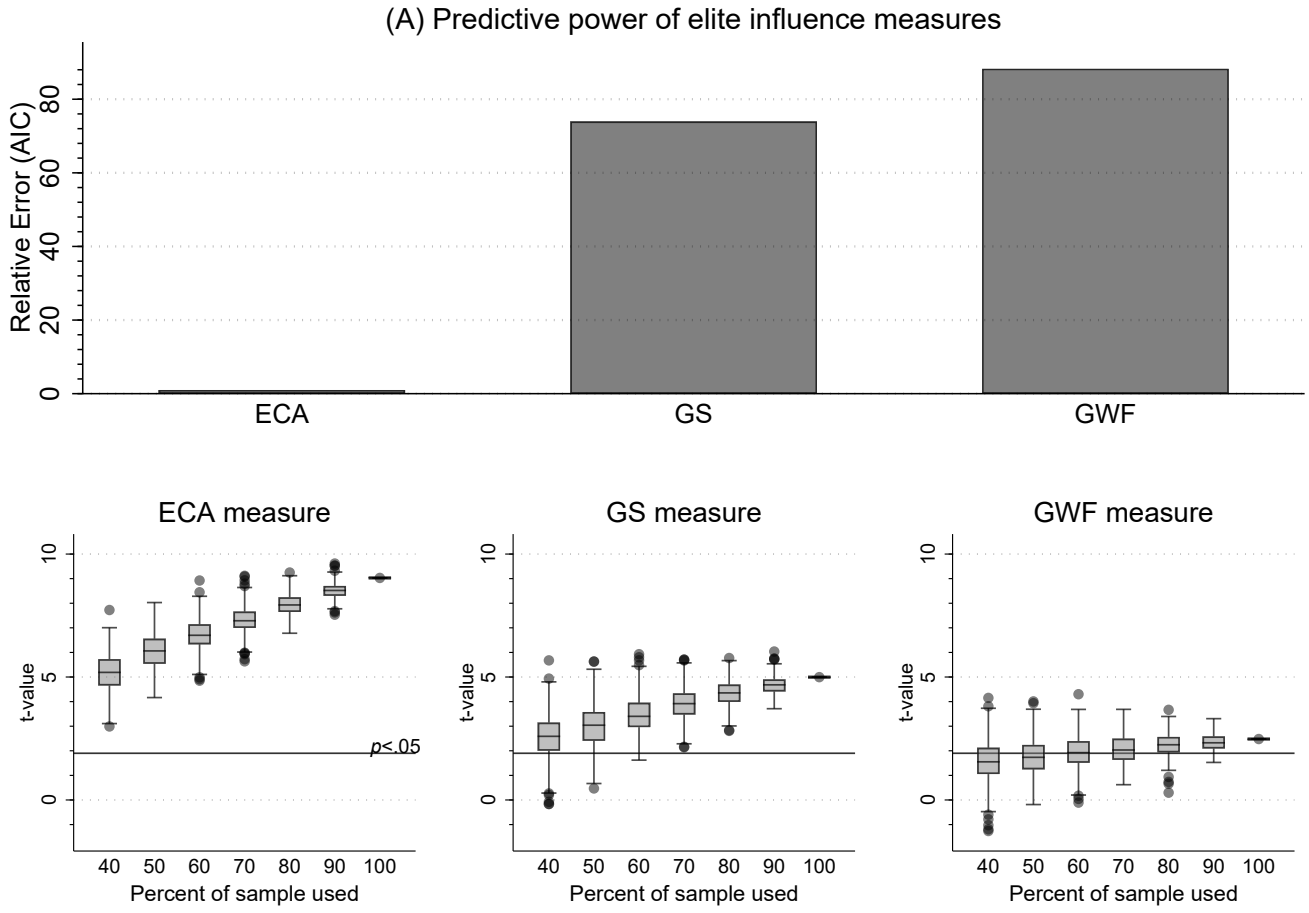
```
.                           if ‘i’==1 matrix ‘var’_‘j’=_b[‘var’]/_se[‘var’]
  7.                           else matrix ‘var’_‘j’=(‘var’_‘j’ \ _b[‘var’]/_se[‘var’] )
  8.
.                           drop rng‘i’
  9.
.                 }
 10.          display ‘j’
 11.          svmat ‘var’_‘j’
 12.          }
 13. }
4
5
6
7
8
9
10
4
5
6
7
8
9
10
4
5
6
7
8
9
10
. preserve
. *reshape data
. keep eca_41-gwf_ps_101
. gen id=_n
. reshape long eca_ gl_ps_ gwf_ps_ , i(id) j(level)
(note: j = 41 51 61 71 81 91 101)
Data                               wide   ->   long
-----------------------------------------------------------------------------
Number of obs.                     4773   ->   33411
Number of variables                  22   ->       5
j variable (7 values)                     ->   level
xij variables:
              eca_41 eca_51 ... eca_101   ->   eca_
        gl_ps_41 gl_ps_51 ... gl_ps_101   ->   gl_ps_
     gwf_ps_41 gwf_ps_51 ... gwf_ps_101   ->   gwf_ps_
-----------------------------------------------------------------------------
. drop if eca==.
(29,911 observations deleted)
. gen jitter=rnormal(0, .0001)
. replace gwf_ps=gwf_ps+jitter if level==101
(500 real changes made)
. replace gl_ps=gl_ps+jitter if level==101
(500 real changes made)
. replace eca=eca+jitter if level==101
(498 real changes made)
. replace level=level-1
(3,500 real changes made)
```

```
. *Produce box plots
. graph box eca, over(level)  box( 1 ,col(black%50) lcolor(black%70)) marker(1, mfcolor(bl
> ack%50) mlcolor(black%0)) ylabel(, glcolor(gs12) glpattern(dot)) ymtick(##5)  graphregio
> n(color(white)) title("ECA measure", color("black")) ytitle("t-value") yline(1.9, lc(bla
> ck%80)) text( 2.2 100  "{it:p}<.05") name(eca, replace) b1title("Percent of sample used"
> )
. graph box gl_ps, over(level)  box( 1 ,col(black%50) lcolor(black%70)) marker(1, mfcolor(
> black%50) mlcolor(black%0)) ylabel(, glcolor(gs12) glpattern(dot)) ymtick(##5)  graphreg
> ion(color(white)) title("GS measure", color("black")) ytitle("t-value") yline(1.9, lc(bl
> ack%80))  name(gs, replace) b1title("Percent of sample used")
. graph box gwf_ps, over(level)  box( 1 ,col(black%50) lcolor(black%70)) marker(1, mfcolor
> (black%50) mlcolor(black%0)) ylabel(, glcolor(gs12) glpattern(dot)) ymtick(##5)  graphre
> gion(color(white)) title("GWF measure", color("black")) ytitle("t-value") yline(1.9, lc(
> black%80)) name(gwf, replace) b1title("Percent of sample used")
. graph combine eca gs gwf, ycommon col(3) xsize(7) graphregion(color(white)) name(graph1,
> replace)
. graph save graph1, replace
(file graph1.gph saved)
```



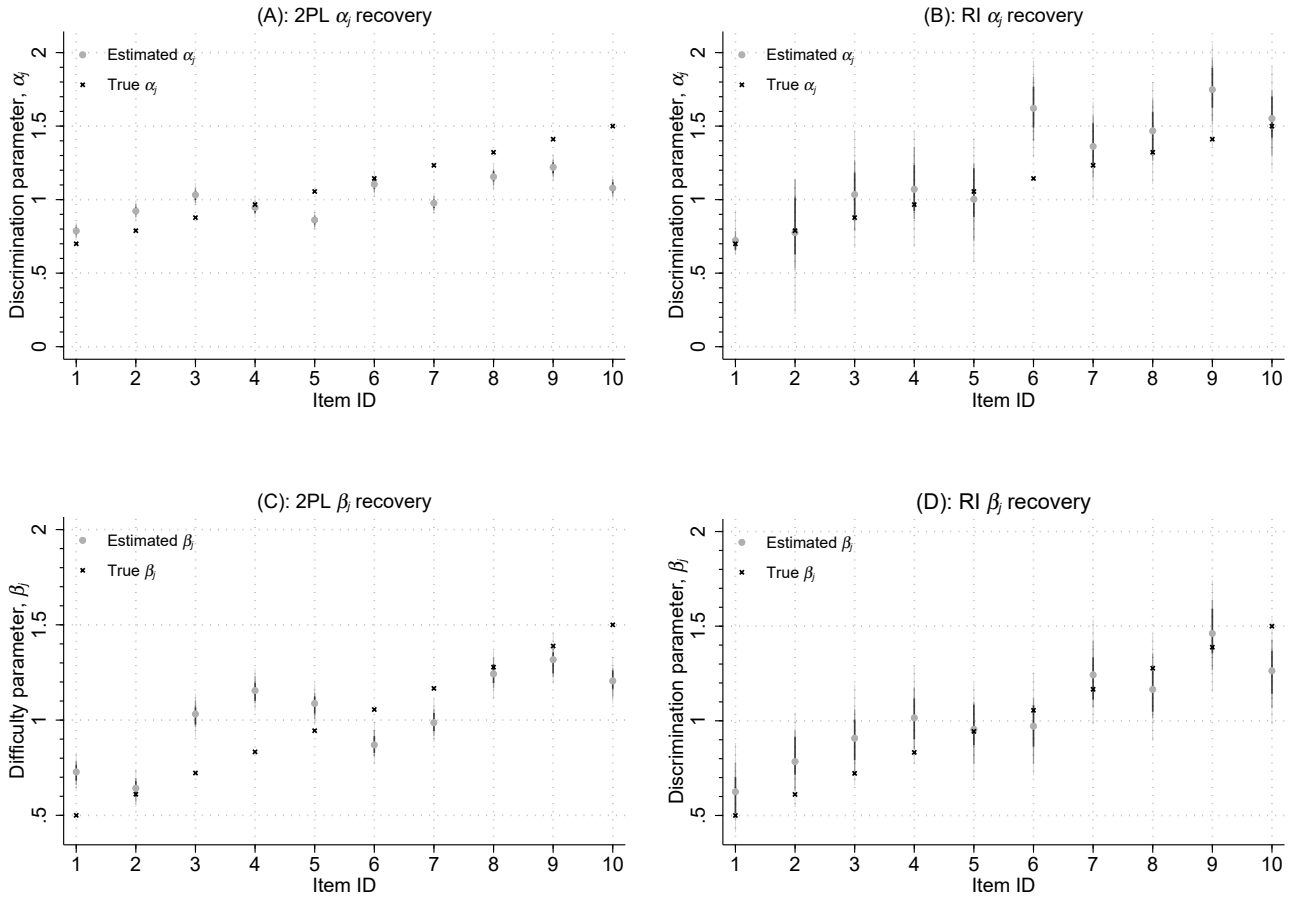

```
. *
. restore
.
. *AIC comparison *
. xtset sid2 year
      panel variable:  sid2 (unbalanced)
       time variable:  year, 1949 to 2013, but with a gap
               delta:  1 unit
.
. foreach var of varlist eca concentrationofpower latent_personalism {
  2.                *Run regression
.               qui xtreg hrs `var' gwf_pa gwf_mil gwf_mon if eca!=.&gl_ps!=.&gwf_ps!=.,
> mle
  3.                qui estat ic
  4.                *Save coefficient/std error
```

```
.                 mat s=r(S)
  5.                 if 'var'==eca matrix AIC=s[1,5]
  6.              else matrix AIC=(AIC \ s[1,5] )
  7.         }
.
. svmat AIC
. sum AIC1, meanonly
. replace AIC1=AIC1-r(min)+1
(3 real changes made)
. gen id=_n if _n<4
(4,770 missing values generated)
. graph bar (mean) AIC1, over(id, relabel(1 "ECA" 2 "GS" 3 "GWF")) box( 1 ,col(black%50) l
> color(black%70)) marker(1, mfcolor(black%50) mlcolor(black%0)) ylabel(, glcolor(gs12) gl
> pattern(dot)) ymtick(##5)  graphregion(color(white)) ytitle("Relative Error (AIC)") titl
> e("(A) Predictive power of elite influence measures", col("black") size(medium)) name(ai
> c, replace)
.
. graph combine aic  graph1 , col(1) graphregion(color(white))
. graph export figure6.pdf, replace
(file figure6.pdf written in PDF format)
```

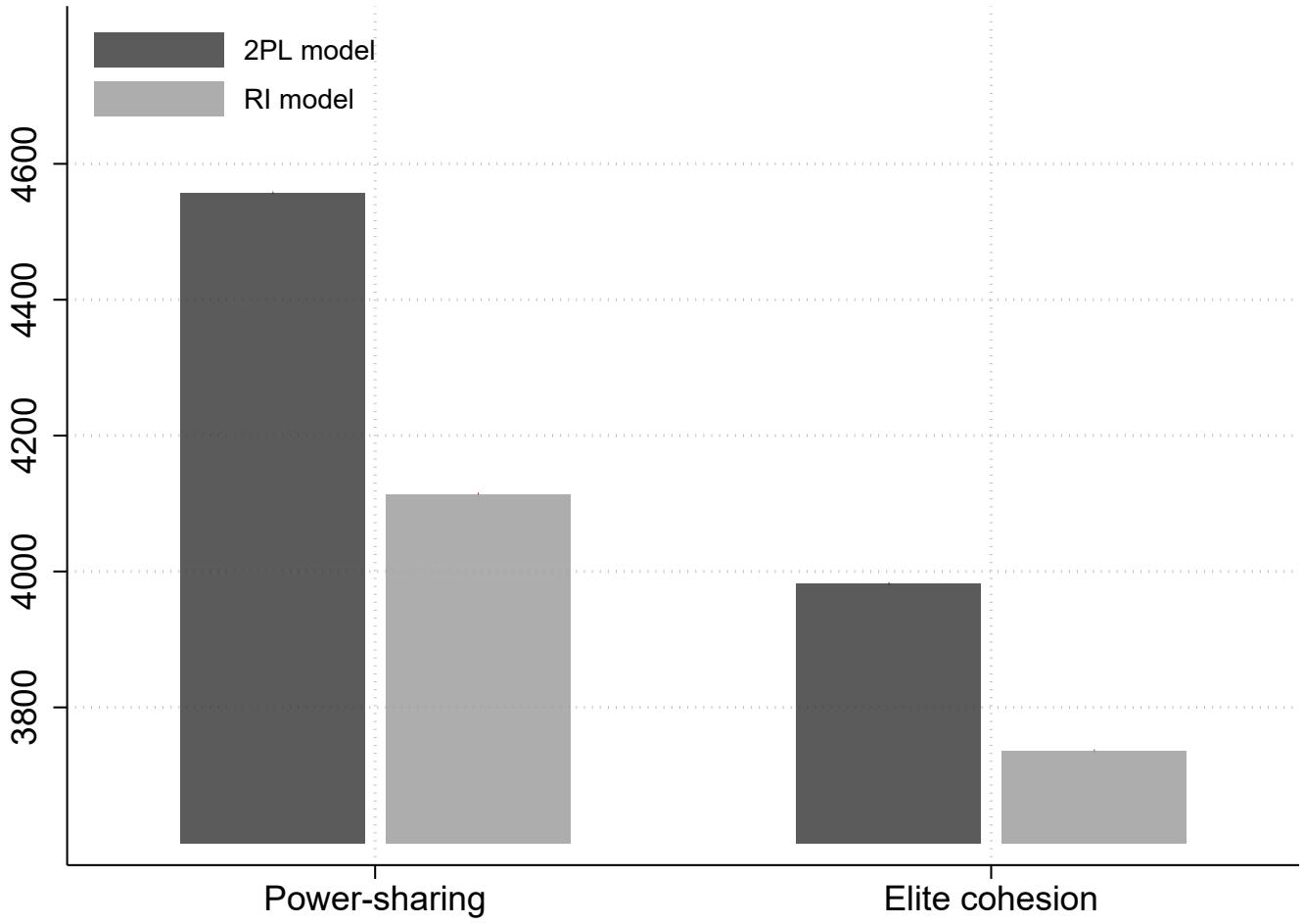



```
.
. **Online appendix
. *Item parameters, Figure 1A
. import delimited "https://github.com/josekaire/ecapaper/raw/main/alpham1plot.csv", clear
(9 vars, 10 obs)
. rename v1 id
```

```
. twoway  (rspike lowerhpdi50 higherhpdi50 id, lcolor(black%60)) (rspike lowerhpdi70 highe
> rhpdi70 id, lcolor(black%30) lwidth(medthin)) (rspike lowerhpdi90 higherhpdi90 id, lcolo
> r(black%15)  lwidth(thin))  (scatter pointestimate id, msymbol(o) msize(medsmall) mcolor
> ("gs11")) (scatter alpha id, msize(small) msymbol(X) mcolor(black)), title("(A): 2PL {it
> :{&alpha}{sub:j}} recovery", col(black) size(medsmall)) $format1  xtitle("Item ID") ytit
> le("Discrimination parameter, {it:{&alpha}{sub:j}}") legend(size(small) order (4 "Estima
> ted {it:{&alpha}{sub:j}}" 5 "True {it:{&alpha}{sub:j}}") col(1) ring(0) position(11) bma
> rgin(small) region(fcolor(%0) lcolor(white%0)))  xlabel(#10) xmtick(##1) name(alpham1, r
> eplace)
.
. import delimited "https://github.com/josekaire/ecapaper/raw/main/alpham2plot.csv", clear
(9 vars, 10 obs)
. rename v1 id
. twoway  (rspike lowerhpdi50 higherhpdi50 id, lcolor(black%60)) (rspike lowerhpdi70 highe
> rhpdi70 id, lcolor(black%30) lwidth(medthin)) (rspike lowerhpdi90 higherhpdi90 id, lcolo
> r(black%15)  lwidth(thin))  (scatter pointestimate id, msymbol(o) msize(medsmall) mcolor
> ("gs11")) (scatter alpha id, msize(small) msymbol(X) mcolor(black)), title("(B): RI {it:
> {&alpha}{sub:j}} recovery", col(black) size(medsmall)) $format1  xtitle("Item ID") ytitl
> e("Discrimination parameter, {it:{&alpha}{sub:j}}") legend(size(small) order (4 "Estimat
> ed {it:{&alpha}{sub:j}}" 5 "True {it:{&alpha}{sub:j}}") col(1) ring(0) position(11) bmar
> gin(small) region(fcolor(%0) lcolor(white%0))) xlabel(#10) xmtick(##1) name(alpham2, rep
> lace)
.
. import delimited "https://github.com/josekaire/ecapaper/raw/main/beta_m1plot.csv", clear
(9 vars, 10 obs)
. rename v1 id
. twoway  (rspike lowerhpdi50 higherhpdi50 id, lcolor(black%60)) (rspike lowerhpdi70 highe
> rhpdi70 id, lcolor(black%30) lwidth(medthin)) (rspike lowerhpdi90 higherhpdi90 id, lcolo
> r(black%15)  lwidth(thin))  (scatter pointestimate id, msymbol(o) msize(medsmall) mcolor
> ("gs11")) (scatter beta id, msize(small) msymbol(X) mcolor(black)), title("(C): 2PL {it:
> {&beta}{sub:j}} recovery", col(black) size(medsmall)) $format1  xtitle("Item ID") ytitle
> ("Difficulty parameter, {it:{&beta}{sub:j}}") legend(size(small) order (4 "Estimated {it
> :{&beta}{sub:j}}" 5 "True {it:{&beta}{sub:j}}") col(1) ring(0) position(11) bmargin(smal
> l) region(fcolor(%0) lcolor(white%0))) xlabel(#10) xmtick(##1) name(betam1, replace)
.
. import delimited "https://github.com/josekaire/ecapaper/raw/main/beta_m2plot.csv", clear
(9 vars, 10 obs)
. rename v1 id
. twoway  (rspike lowerhpdi50 higherhpdi50 id, lcolor(black%60)) (rspike lowerhpdi70 highe
> rhpdi70 id, lcolor(black%30) lwidth(medthin)) (rspike lowerhpdi90 higherhpdi90 id, lcolo
> r(black%15)  lwidth(thin))  (scatter pointestimate id, msymbol(o) msize(medsmall) mcolor
> ("gs11")) (scatter beta id, msize(small) msymbol(X) mcolor(black)), title("(D): RI {it:{
> &beta}{sub:j}} recovery", col(black) size(med)) $format1  xtitle("Item ID") ytitle("Disc
> rimination parameter, {it:{&beta}{sub:j}}") legend(size(small) order (4 "Estimated {it:{
> &beta}{sub:j}}" 5 "True {it:{&beta}{sub:j}}") col(1) ring(0) position(11) bmargin(small)
> region(fcolor(%0) lcolor(white%0)))  xlabel(#10) xmtick(##1) name(betam2, replace)
(note:  named style med not found in class gsize, default attributes used)
.
. graph combine alpham1 alpham2, ycommon name(alpha, replace) graphregion(color(white))
. graph combine betam1 betam2, ycommon name(beta, replace) graphregion(color(white))
(note:  named style med not found in class gsize, default attributes used)
.
. graph combine alpha beta, graphregion(color(white)) col(1)
(note:  named style med not found in class gsize, default attributes used)
. graph export figure7.pdf, replace
(file figure7.pdf written in PDF format)
```




```
. *Item random effects, Figure 2A
. import delimited "https://github.com/josekaire/ecapaper/raw/main/realdata_looic.csv", en
> coding(UTF-8)  clear
(3 vars, 4 obs)
. encode model, gen(mri)
. encode parameter, gen(power)
.
. qui reg looic i.mri##i.power
.  qui margins, at(mri=(1 ) power=(1 2)) post
. qui estimates store m2PL
. qui reg looic i.mri##i.power
. qui margins, at(mri=(2) power=(1 2)) post
. estimates store mRI
.
. coefplot (m2PL, fcolor(black%80) ) (mRI, fcolor(gray%80)) ,  coeflabels(1._at ="Power-sh
> aring" 2._at ="Elite cohesion")  vertical recast(bar) barwidth(.3)   fcolor(.5) lcolor(%
> 0) legend(size(small) order (2 "2PL model" 4 "RI model") col(1) ring(0) position(11) bma
> rgin(small) region(fcolor(%0) lcolor(white%0))) yscale(range(3600 4800)) ylabel(3800(200
> )4600)  graphregion(color(white))  ylabel(, glcolor(gs12) glpattern(dot)) ymtick(##0)  x
> label(, grid glcolor(gs12) glpattern(dot) ) xlabel(, grid glcolor(gs12) glpattern(dot) )
. graph export figure8.pdf, replace
(file figure8.pdf written in PDF format)
```




```
.
. log close
      name:  <unnamed>
       log:  C:\Users\josek\Documents\Research\ECA paper\Replication materials\PSRM replic
> ation\replicationlog.log
  log type:  text
 closed on:   5 Aug 2022, 15:06:39
-------------------------------------------------------------------------------------------
> --------------------
```