Statistics/Data Analysis

```
      name:  <unnamed>
       log:  c:\data\Fails_PSRM_Log.smcl
  log type:  smcl
 opened on:  21 Feb 2019, 11:39:30

1 .
2 . /*
  > Replication code for "Oil Income and the Personalization of Autocratic Politics"
  > Author: Matthew Fails
  > Email:  fails@oakland.edu
  > PSRM manusctipt #PSRM-RN-2018-0133.R1
  > */
3 .
4 . /*
  > Note: code reflects post-acceptance changes to model reporting; Table 1 now
  > reports only models from 1991-2010 sample; Models covering 1980-2010
  > (originally reported in Table 1 Models 1-2 in conditionally accepted manuscript)
  > are now reported as Table 1A in Appendix/Supplemental Material
  > */
5 .
6 . clear

7 .
8 . /*Please insert path where dataset ("PSRM_Personalism_Dataset") has been saved*/
9 . cd c:\data
  c:\data

10.
11. ***************
12. **READ IN DATA
13. ***************
14. use PSRM_Personalism_Dataset, clear

15.
16. /*
  > Dataset defined as all observations with non-missing measures of
  > 'latent_personalism' in Geddes, Wright, and Frantz (2018; hereafter GWF)
  > "Time Varying Measure of Personalism" dataset.
  > All vars with "gwf_" prefix are drawn from this dataset
  > */
17.
18. **declare data structure
19. tsset gwf_caseid year
        panel variable:  gwf_caseid (unbalanced)
         time variable:  year, 1960 to 2010
                 delta:  1 unit

20.
21.
22. ***************
23. **VARIABLE CREATION / DATA MAINTENANCE
24. ***************
25.
26. gen lincome_new = ln(WBincome_new)
  (2,704 missing values generated)

27. label var lincome_new "Log income per capita, newest WDI"

28.
```

```
. gen oil_new = ln(oil_gas_valuepop_2014+1)
  (102 missing values generated)

. label var oil_new "log of oil income per capita, newest Ross/Mahdavi data"

.
. gen logdur = ln(gwf_leader_duration)

. label var log "natural log of leader duration, GWF data"

.
. gen popmad_adj = pop_maddison/1000000
  (175 missing values generated)

. label var popmad_adj "Population, Maddison, in millions"

.
. gen lgdppc = ln(gdppc_wdi)
  (965 missing values generated)

. label var lgdppc "log of gdp per capita, Graham/WDI data"

.
. label var tax "Tax Revenue as a share of GDP, IMF"

. label var in_pctgdp "FDI inflow as share of GDP, newest WDI"

.
. label var ccode "COWCODE"

. label var country "Country name

. label var oil_price_2000 "Oil price in constant 2000 USD, Ross/Mahdavi data"

. label var pop_maddison "Population, Maddison estimates"

. label var WBincome_new "Income per capita, newest WDI"

. label var latent_personalism "GWF latent personalism measure, standardized"

. label var pers_2pl "GWF latent personalism measure, unstandardized"

.
. **************
. **FIGURE 1
. **************
.
. *Generate measures for Figure 1
. /*steps:
  > 1) by regime, calculate average oil income per capita
  > 2) by regime, generate "oil regime" dummy if the mean in step 1 is greater than 100
  > 3) by year, calculate average levels of personalism for oil regimes ('avgpersO') and
  >  non-oil regimes ('avgpersNO')
  > */
. bysort gwf_caseid: egen oil_a2 = mean(oil_gas_valuepop_2014)
  (74 missing values generated)

. bysort gwf_caseid: gen oilstate2 = 1 if oil_a2>=100
  (2,722 missing values generated)
```

```
60. bysort year: egen avgpersO = mean(latent_personalism) if oilstate2==1
  (2722 missing values generated)

61. bysort year: egen avgpersNO = mean(latent_personalism) if oilstate2!=1 & oil_gas_val
  > uepop_2014!=.
  (1280 missing values generated)

62.
63. *Figure 1 (requires scheme 'plotplain' installed)
64. graph twoway (line avgpersO year, clpattern(dash) xline(1991) xline(1980) xaxis(1 2)
  >  xla(1980 "Big Oil Change" 1991 "Cold War Ends", axis(1)) xtitle("", axis(1)) xscale
  > (noline axis(1))  ytitle("Average Personalism Score") xtitle("Year", axis(2))) (line
  >  avgpersNO year, clpattern(shortdash) scheme(plotplain)) ///
  > (line oil_price_2000 year, ytitle("Price of Crude Oil, in constant USD", axis(2)) cl
  > pattern(solid) yaxis(2) note("Note: Oil regimes defined as those averaging more than
  >  $100 in per-capita oil income" "over the duration of the regime, using data from Ro
  > ss and Mahdavi (2013).") ///
  > legend(order(1 "Oil Regimes" 2 "Non-Oil Regimes" 3 "Oil Price")))

65. graph save PersonalismFigure1, replace
  (file PersonalismFigure1.gph saved)

66.
67. ***************
68. *START REGRESSION ANALYSIS
69. ***************
70. tsset gwf_caseid year
        panel variable:  gwf_caseid (unbalanced)
         time variable:  year, 1960 to 2010
                 delta:  1 unit

71.
72. *TABLE 1
73.
74. *Model 1 - Baseline specification, post-Cold War
75. xtreg pers_2pl l2.oil_new l2.lincome_new l.popmad_adj l.gwf_firstldr l.logdur i.year
  >  if year>1991, fe robust

Fixed-effects (within) regression               Number of obs      =       1,031
Group variable: gwf_caseid                      Number of groups   =          91

R-sq:                                           Obs per group:
     within  = 0.1471                                         min =           1
     between = 0.3728                                         avg =        11.3
     overall = 0.3124                                         max =          19

                                                F(23,90)           =        4.10
corr(u_i, Xb)  = 0.0979                         Prob > F           =      0.0000

                              (Std. Err. adjusted for 91 clusters in gwf_caseid)
------------------------------------------------------------------------------
             |               Robust
    pers_2pl |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     oil_new |
         L2. |    .038383    .022106     1.74   0.086    -.0055344    .0823004
             |
 lincome_new |
         L2. |   -.183681   .2405829    -0.76   0.447    -.6616409    .2942789
             |
  popmad_adj |
         L1. |  -.0015363   .0019193    -0.80   0.426    -.0053493    .0022766
             |
gwf_firstldr |
         L1. |    .281753   .2024094     1.39   0.167    -.1203686    .6838747
             |
      logdur |
         L1. |   .1094618   .0378649     2.89   0.005     .0342365    .1846872
             |
        year |
        1993 |   .0476587   .0305996     1.56   0.123    -.0131327    .1084501
        1994 |  -.0039536   .0555659    -0.07   0.943    -.1143449    .1064377
```

1995	.010988	.053821	0.20	0.839	-.0959369	.1179129
1996	.0321209	.0593023	0.54	0.589	-.0856935	.1499354
1997	.0155705	.0574058	0.27	0.787	-.0984762	.1296171
1998	.0099393	.062089	0.16	0.873	-.1134113	.13329
1999	-.0365297	.0875523	-0.42	0.678	-.2104677	.1374083
2000	.0231549	.0714799	0.32	0.747	-.1188523	.1651622
2001	.0362756	.0733822	0.49	0.622	-.1095109	.1820622
2002	.0008455	.0668612	0.01	0.990	-.131986	.1336769
2003	.039364	.0781561	0.50	0.616	-.1159068	.1946348
2004	.0024917	.0760717	0.03	0.974	-.1486381	.1536214
2005	.0526591	.0767567	0.69	0.494	-.0998313	.2051496
2006	.0160249	.0912028	0.18	0.861	-.1651654	.1972151
2007	.0388223	.0954005	0.41	0.685	-.1507075	.2283521
2008	.0729779	.1031423	0.71	0.481	-.1319323	.2778881
2009	.0630778	.1142473	0.55	0.582	-.1638944	.29005
2010	.0928991	.1200707	0.77	0.441	-.1456423	.3314405
_cons	1.203091	1.868677	0.64	0.521	-2.509361	4.915543
sigma_u	.61334647					
sigma_e	.27661961					
rho	.83097785	(fraction of variance due to u_i)				

76. est store m1

77. *identify top 10% threshold of oil production for robustness analysis
78. centile oil_new if e(sample), centile(90)

Variable	Obs	Percentile	Centile	Binom. Interp. [95% Conf.	Interval]
oil_new	1,031	90	8.120672	7.928229	8.351705

79. *Model 2 - Baseline speficication, post-Cold War, exclude top 10% of oil_new obs
80. xtreg pers_2pl l2.oil_new l2.lincome_new l.popmad_adj l.gwf_firstldr l.logdur i.year
> if year>1991 & oil_new<8.120672, fe robust

Fixed-effects (within) regression — Number of obs = 928
Group variable: gwf_caseid — Number of groups = 89

R-sq:
within = 0.1631
between = 0.3209
overall = 0.2614

Obs per group:
min = 1
avg = 10.4
max = 19

F(23,88) = 5.00
corr(u_i, Xb) = -0.0783 — Prob > F = 0.0000

(Std. Err. adjusted for 89 clusters in gwf_caseid)

pers_2pl	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	.0365001	.0207211	1.76	0.082	-.0046788	.0776789
lincome_new L2.	-.0667334	.2158293	-0.31	0.758	-.4956489	.362182
popmad_adj L1.	-.0021856	.0016725	-1.31	0.195	-.0055094	.0011383
gwf_firstldr L1.	.2783048	.1880725	1.48	0.143	-.0954498	.6520593
logdur L1.	.1315194	.0396351	3.32	0.001	.052753	.2102858
year						
1993	.0515863	.0334359	1.54	0.126	-.0148605	.1180331
1994	-.0056956	.0603191	-0.09	0.925	-.1255672	.114176

1995	.0164456	.0587182	0.28	0.780	-.1002444	.1331356
1996	.0351326	.0633585	0.55	0.581	-.090779	.1610443
1997	.0108961	.0612461	0.18	0.859	-.1108178	.1326099
1998	-.0018294	.0655861	-0.03	0.978	-.132168	.1285093
1999	-.0564572	.0933372	-0.60	0.547	-.2419452	.1290308
2000	.0031398	.0748847	0.04	0.967	-.1456778	.1519573
2001	.0193733	.0772439	0.25	0.803	-.1341328	.1728793
2002	-.023388	.0714948	-0.33	0.744	-.1654689	.118693
2003	.0176409	.0808897	0.22	0.828	-.1431104	.1783921
2004	-.026216	.0882592	-0.30	0.767	-.2016125	.1491806
2005	.0062622	.0842197	0.07	0.941	-.1611067	.1736311
2006	-.0334849	.1005017	-0.33	0.740	-.2332109	.1662411
2007	.0112073	.1084749	0.10	0.918	-.2043637	.2267784
2008	-.0027073	.1128141	-0.02	0.981	-.2269016	.2214871
2009	.0003475	.1196883	0.00	0.998	-.2375079	.2382029
2010	.0650016	.1333348	0.49	0.627	-.1999732	.3299764
_cons	.2560418	1.637153	0.16	0.876	-2.997456	3.509539
sigma_u	.63603138					
sigma_e	.2792799					
rho	.83835875	(fraction of variance due to u_i)				

81. est store m2

82. *Model 3 - Extra controls, post-Cold War
83. xtreg pers_2pl l2.oil_new l2.lincome_new l.popmad_adj l.gwf_firstldr l.logdur l2.in_
> pctgdp l2.tax i.year if year>1991, fe robust

Fixed-effects (within) regression Number of obs = **844**
Group variable: **gwf_caseid** Number of groups = **83**

R-sq: Obs per group:
within = **0.1649** min = **1**
between = **0.3249** avg = **10.2**
overall = **0.3250** max = **19**

F(**25,82**) = **17.09**
corr(u_i, Xb) = **-0.0398** Prob > F = **0.0000**

(Std. Err. adjusted for **83** clusters in gwf_caseid)

pers_2pl	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	.0693086	.0266759	2.60	0.011	.0162418	.1223754
lincome_new L2.	-.3129442	.3574862	-0.88	0.384	-1.024098	.3982099
popmad_adj L1.	-.0014607	.0025624	-0.57	0.570	-.0065582	.0036368
gwf_firstldr L1.	.3655374	.2188461	1.67	0.099	-.0698172	.800892
logdur L1.	.0916774	.0383288	2.39	0.019	.0154292	.1679256
in_pctgdp L2.	-.0003706	.0034489	-0.11	0.915	-.0072315	.0064904
tax L2.	.004732	.0070564	0.67	0.504	-.0093053	.0187694
year						
1993	.0866388	.050058	1.73	0.087	-.0129425	.18622
1994	.0635544	.0705846	0.90	0.371	-.0768609	.2039697
1995	.0763768	.0677174	1.13	0.263	-.0583348	.2110883
1996	.0927543	.074994	1.24	0.220	-.0564327	.2419413

1997	.0592702	.0731623	0.81	0.420	-.086273	.2048134
1998	.0381476	.0771044	0.49	0.622	-.1152377	.1915328
1999	.005904	.1087096	0.05	0.957	-.2103541	.2221621
2000	.0524913	.0927076	0.57	0.573	-.1319336	.2369162
2001	.0553037	.0960863	0.58	0.566	-.1358425	.2464499
2002	-.002778	.0895339	-0.03	0.975	-.1808895	.1753334
2003	.054405	.1016643	0.54	0.594	-.1478376	.2566476
2004	.0165589	.0920365	0.18	0.858	-.1665309	.1996488
2005	.069014	.1049598	0.66	0.513	-.1397844	.2778124
2006	.0292076	.1269501	0.23	0.819	-.2233366	.2817519
2007	.0647375	.1351628	0.48	0.633	-.2041444	.3336195
2008	.0741608	.1511297	0.49	0.625	-.2264844	.374806
2009	.0712779	.1686263	0.42	0.674	-.2641736	.4067294
2010	.1003215	.1761879	0.57	0.571	-.2501723	.4508153
_cons	2.094625	2.790642	0.75	0.455	-3.456851	7.646101
sigma_u	.60870586					
sigma_e	.27829424					
rho	.82711432	(fraction of variance due to u_i)				

84. est store m3

85. *identify top 10% threshold of oil production for robustness analysis
86. centile oil_new if e(sample), centile(90)

Variable	Obs	Percentile	Centile	Binom. Interp. [95% Conf.	Interval]
oil_new	844	90	8.347798	8.116346	8.574908

87. *Model 4 - Extra controls, post-Cold War, exclude top 10% of oil_new obs
88. xtreg pers_2pl l2.oil_new l2.lincome_new l.popmad_adj l.gwf_firstldr l.logdur l2.in_
> pctgdp l2.tax i.year if year>1991 & oil_new<8.347798, fe robust

Fixed-effects (within) regression — Number of obs = 760
Group variable: gwf_caseid — Number of groups = 81

R-sq: — Obs per group:
within = 0.1909 — min = 1
between = 0.3720 — avg = 9.4
overall = 0.3547 — max = 19

F(25,80) = 16.70
corr(u_i, Xb) = -0.0316 — Prob > F = 0.0000

(Std. Err. adjusted for 81 clusters in gwf_caseid)

pers_2pl	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	.0711386	.0275389	2.58	0.012	.0163344	.1259429
lincome_new L2.	-.2529314	.3955894	-0.64	0.524	-1.040179	.5343167
popmad_adj L1.	-.0016414	.0026398	-0.62	0.536	-.0068947	.0036119
gwf_firstldr L1.	.4231833	.2198957	1.92	0.058	-.0144231	.8607897
logdur L1.	.1161813	.0418152	2.78	0.007	.0329665	.1993962
in_pctgdp L2.	-.0013726	.0034941	-0.39	0.695	-.0083261	.0055808
tax L2.	.0043255	.0077421	0.56	0.578	-.0110819	.0197328

year						
1993	.0965603	.0538226	1.79	0.077	-.01055	.2036706
1994	.0694321	.0757247	0.92	0.362	-.0812649	.2201291
1995	.0815343	.0726981	1.12	0.265	-.0631395	.2262081
1996	.0993243	.0803117	1.24	0.220	-.0605011	.2591497
1997	.0569978	.0778548	0.73	0.466	-.0979381	.2119337
1998	.0308055	.0823533	0.37	0.709	-.1330828	.1946937
1999	-.0067521	.1156728	-0.06	0.954	-.2369482	.2234441
2000	.0360049	.0991533	0.36	0.717	-.1613164	.2333263
2001	.0482986	.1040229	0.46	0.644	-.1587136	.2553109
2002	-.0183069	.0992014	-0.18	0.854	-.2157239	.1791102
2003	.045758	.1141852	0.40	0.690	-.1814778	.2729939
2004	.0080158	.1078413	0.07	0.941	-.2065952	.2226268
2005	.0690997	.1272167	0.54	0.589	-.1840696	.322269
2006	.0038343	.1516498	0.03	0.980	-.2979585	.3056271
2007	.044533	.1609437	0.28	0.783	-.275755	.3648211
2008	.0433962	.1886337	0.23	0.819	-.3319969	.4187893
2009	.0423452	.2034858	0.21	0.836	-.3626046	.4472949
2010	.0812097	.2140981	0.38	0.705	-.3448591	.5072786
_cons	1.516182	2.983415	0.51	0.613	-4.421004	7.453367

sigma_u	.59491306	
sigma_e	.28789623	
rho	.81024922	(fraction of variance due to u_i)

```
89. est store m2

90.
91. esttab m* using m1.csv, cells(b(star  fmt(%9.3f)) se(par fmt(%9.3f))) stats(N) style
  > (tab) replace label starlevels(* 0.10 ** 0.05 *** 0.01)
  (output written to m1.csv)

92.
93.
94. **FIGURE 2 - ESTIMATES OF PARAMETERS OF INTEREST FROM MODELS 2-4
95. /*Stages of analysis:
  > 1) Define an IQR increase in each relevant variable
  > 2) Esimate, by model, the change in expected value of the DV per an IQR increase in
  > each relevant variable, all other covariates held to mean values
  > 3) Combine these estimates into a single plot
  > */
96.
97. *Model 2
98. xtreg pers_2pl l2.oil_new l2.lincome_new l.popmad_adj l.gwf_firstldr l.logdur i.year
  >  if year>1991 & oil_new<8.120672, fe robust

Fixed-effects (within) regression               Number of obs      =       928
Group variable: gwf_caseid                      Number of groups   =        89

R-sq:                                           Obs per group:
     within  = 0.1631                                         min =         1
     between = 0.3209                                         avg =      10.4
     overall = 0.2614                                         max =        19

                                                F(23,88)           =      5.00
corr(u_i, Xb)  = -0.0783                        Prob > F           =    0.0000

                              (Std. Err. adjusted for 89 clusters in gwf_caseid)
```

pers_2pl	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	.0365001	.0207211	1.76	0.082	-.0046788	.0776789
lincome_new L2.	-.0667334	.2158293	-0.31	0.758	-.4956489	.362182
popmad_adj						

L1.	-.0021856	.0016725	-1.31	0.195	-.0055094	.0011383
gwf_firstldr						
L1.	.2783048	.1880725	1.48	0.143	-.0954498	.6520593
logdur						
L1.	.1315194	.0396351	3.32	0.001	.052753	.2102858
year						
1993	.0515863	.0334359	1.54	0.126	-.0148605	.1180331
1994	-.0056956	.0603191	-0.09	0.925	-.1255672	.114176
1995	.0164456	.0587182	0.28	0.780	-.1002444	.1331356
1996	.0351326	.0633585	0.55	0.581	-.090779	.1610443
1997	.0108961	.0612461	0.18	0.859	-.1108178	.1326099
1998	-.0018294	.0655861	-0.03	0.978	-.132168	.1285093
1999	-.0564572	.0933372	-0.60	0.547	-.2419452	.1290308
2000	.0031398	.0748847	0.04	0.967	-.1456778	.1519573
2001	.0193733	.0772439	0.25	0.803	-.1341328	.1728793
2002	-.023388	.0714948	-0.33	0.744	-.1654689	.118693
2003	.0176409	.0808897	0.22	0.828	-.1431104	.1783921
2004	-.026216	.0882592	-0.30	0.767	-.2016125	.1491806
2005	.0062622	.0842197	0.07	0.941	-.1611067	.1736311
2006	-.0334849	.1005017	-0.33	0.740	-.2332109	.1662411
2007	.0112073	.1084749	0.10	0.918	-.2043637	.2267784
2008	-.0027073	.1128141	-0.02	0.981	-.2269016	.2214871
2009	.0003475	.1196883	0.00	0.998	-.2375079	.2382029
2010	.0650016	.1333348	0.49	0.627	-.1999732	.3299764
_cons	.2560418	1.637153	0.16	0.876	-2.997456	3.509539
sigma_u	.63603138					
sigma_e	.2792799					
rho	.83835875	(fraction of variance due to u_i)				

99. centile oil_new logdur gwf_firstldr if e(sample), centile(25 75)

Variable	Obs	Percentile	Centile	Binom. Interp. [95% Conf.	Interval]
oil_new	928	25	0	0	0
		75	5.025818	4.743321	5.455175
logdur	928	25	1.609438	1.386294	1.609438
		75	2.833213	2.772589	2.890372
gwf_firstldr	928	25	0	0	0
		75	1	1	1

100
101 margins, at(l2.oil_new=(0,5.025)) atmeans level(90) contrast(at effects) post

Contrasts of adjusted predictions
Model VCE : **Robust**

Expression : **Linear prediction, predict()**

1._at : L2.oil_new = **0**
L2.lincome~w = **8.056082** (mean)
L.popmad_adj = **47.56685** (mean)
L.gwf_firs~r = **.4924569** (mean)
L.logdur = **2.117583** (mean)
1992.year = **.0538793** (mean)
1993.year = **.0549569** (mean)
1994.year = **.0538793** (mean)
1995.year = **.0528017** (mean)
1996.year = **.0538793** (mean)
1997.year = **.0581897** (mean)
1998.year = **.0592672** (mean)
1999.year = **.0592672** (mean)
2000.year = **.0560345** (mean)
2001.year = **.0538793** (mean)
2002.year = **.0571121** (mean)
2003.year = **.0549569** (mean)

```
                2004.year       =     .049569  (mean)
                2005.year       =    .0484914  (mean)
                2006.year       =    .0484914  (mean)
                2007.year       =    .0463362  (mean)
                2008.year       =     .044181  (mean)
                2009.year       =    .0484914  (mean)
                2010.year       =    .0463362  (mean)

2._at           : L2.oil_new      =       5.025
                  L2.lincome~w    =    8.056082  (mean)
                  L.popmad_adj    =    47.56685  (mean)
                  L.gwf_firs~r    =    .4924569  (mean)
                  L.logdur        =    2.117583  (mean)
                  1992.year       =    .0538793  (mean)
                  1993.year       =    .0549569  (mean)
                  1994.year       =    .0538793  (mean)
                  1995.year       =    .0528017  (mean)
                  1996.year       =    .0538793  (mean)
                  1997.year       =    .0581897  (mean)
                  1998.year       =    .0592672  (mean)
                  1999.year       =    .0592672  (mean)
                  2000.year       =    .0560345  (mean)
                  2001.year       =    .0538793  (mean)
                  2002.year       =    .0571121  (mean)
                  2003.year       =    .0549569  (mean)
                  2004.year       =     .049569  (mean)
                  2005.year       =    .0484914  (mean)
                  2006.year       =    .0484914  (mean)
                  2007.year       =    .0463362  (mean)
                  2008.year       =     .044181  (mean)
                  2009.year       =    .0484914  (mean)
                  2010.year       =    .0463362  (mean)
```

	df	chi2	P>chi2
_at	**1**	**3.10**	**0.0782**

	Contrast	Delta-method Std. Err.	z	P>|z|	[90% Conf.	Interval]
_at (2 vs base)	**.1834128**	**.1041235**	**1.76**	**0.078**	**.0121449**	**.3546807**

```
102 estimates store margins_1

103
104 xtreg pers_2pl l2.oil_new l2.lincome_new l.popmad_adj l.gwf_firstldr l.logdur i.year
  >  if year>1991 & oil_new<8.120672, fe robust

  Fixed-effects (within) regression               Number of obs     =         928
  Group variable: gwf_caseid                      Number of groups  =          89

  R-sq:                                           Obs per group:
       within  = 0.1631                                         min =           1
       between = 0.3209                                         avg =        10.4
       overall = 0.2614                                         max =          19

                                                  F(23,88)          =        5.00
  corr(u_i, Xb)  = -0.0783                        Prob > F          =      0.0000
```

(Std. Err. adjusted for **89** clusters in gwf_caseid)

pers_2pl	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	**.0365001**	**.0207211**	**1.76**	**0.082**	**-.0046788**	**.0776789**
lincome_new L2.	**-.0667334**	**.2158293**	**-0.31**	**0.758**	**-.4956489**	**.362182**
popmad_adj L1.	**-.0021856**	**.0016725**	**-1.31**	**0.195**	**-.0055094**	**.0011383**
gwf_firstldr L1.	**.2783048**	**.1880725**	**1.48**	**0.143**	**-.0954498**	**.6520593**
logdur L1.	**.1315194**	**.0396351**	**3.32**	**0.001**	**.052753**	**.2102858**
year						
1993	**.0515863**	**.0334359**	**1.54**	**0.126**	**-.0148605**	**.1180331**
1994	**-.0056956**	**.0603191**	**-0.09**	**0.925**	**-.1255672**	**.114176**
1995	**.0164456**	**.0587182**	**0.28**	**0.780**	**-.1002444**	**.1331356**
1996	**.0351326**	**.0633585**	**0.55**	**0.581**	**-.090779**	**.1610443**
1997	**.0108961**	**.0612461**	**0.18**	**0.859**	**-.1108178**	**.1326099**
1998	**-.0018294**	**.0655861**	**-0.03**	**0.978**	**-.132168**	**.1285093**
1999	**-.0564572**	**.0933372**	**-0.60**	**0.547**	**-.2419452**	**.1290308**
2000	**.0031398**	**.0748847**	**0.04**	**0.967**	**-.1456778**	**.1519573**
2001	**.0193733**	**.0772439**	**0.25**	**0.803**	**-.1341328**	**.1728793**
2002	**-.023388**	**.0714948**	**-0.33**	**0.744**	**-.1654689**	**.118693**
2003	**.0176409**	**.0808897**	**0.22**	**0.828**	**-.1431104**	**.1783921**
2004	**-.026216**	**.0882592**	**-0.30**	**0.767**	**-.2016125**	**.1491806**
2005	**.0062622**	**.0842197**	**0.07**	**0.941**	**-.1611067**	**.1736311**
2006	**-.0334849**	**.1005017**	**-0.33**	**0.740**	**-.2332109**	**.1662411**
2007	**.0112073**	**.1084749**	**0.10**	**0.918**	**-.2043637**	**.2267784**
2008	**-.0027073**	**.1128141**	**-0.02**	**0.981**	**-.2269016**	**.2214871**
2009	**.0003475**	**.1196883**	**0.00**	**0.998**	**-.2375079**	**.2382029**
2010	**.0650016**	**.1333348**	**0.49**	**0.627**	**-.1999732**	**.3299764**
_cons	**.2560418**	**1.637153**	**0.16**	**0.876**	**-2.997456**	**3.509539**
sigma_u	**.63603138**					
sigma_e	**.2792799**					
rho	**.83835875**	(fraction of variance due to u_i)				

105 margins, at(l.logdur=(1.609,2.833)) atmeans level(90) contrast(at effects) post

Contrasts of adjusted predictions
Model VCE : **Robust**

Expression : **Linear prediction, predict()**

1._at : L2.oil_new = **2.431715** (mean)
L2.lincome~w = **8.056082** (mean)
L.popmad_adj = **47.56685** (mean)
L.gwf_firs~r = **.4924569** (mean)
L.logdur = **1.609**
1992.year = **.0538793** (mean)
1993.year = **.0549569** (mean)
1994.year = **.0538793** (mean)
1995.year = **.0528017** (mean)
1996.year = **.0538793** (mean)
1997.year = **.0581897** (mean)
1998.year = **.0592672** (mean)
1999.year = **.0592672** (mean)
2000.year = **.0560345** (mean)
2001.year = **.0538793** (mean)
2002.year = **.0571121** (mean)
2003.year = **.0549569** (mean)
2004.year = **.049569** (mean)

```
                2005.year       =    .0484914  (mean)
                2006.year       =    .0484914  (mean)
                2007.year       =    .0463362  (mean)
                2008.year       =     .044181  (mean)
                2009.year       =    .0484914  (mean)
                2010.year       =    .0463362  (mean)

2._at           : L2.oil_new      =    2.431715  (mean)
                  L2.lincome~w    =    8.056082  (mean)
                  L.popmad_adj    =    47.56685  (mean)
                  L.gwf_firs~r    =    .4924569  (mean)
                  L.logdur        =       2.833
                  1992.year       =    .0538793  (mean)
                  1993.year       =    .0549569  (mean)
                  1994.year       =    .0538793  (mean)
                  1995.year       =    .0528017  (mean)
                  1996.year       =    .0538793  (mean)
                  1997.year       =    .0581897  (mean)
                  1998.year       =    .0592672  (mean)
                  1999.year       =    .0592672  (mean)
                  2000.year       =    .0560345  (mean)
                  2001.year       =    .0538793  (mean)
                  2002.year       =    .0571121  (mean)
                  2003.year       =    .0549569  (mean)
                  2004.year       =     .049569  (mean)
                  2005.year       =    .0484914  (mean)
                  2006.year       =    .0484914  (mean)
                  2007.year       =    .0463362  (mean)
                  2008.year       =     .044181  (mean)
                  2009.year       =    .0484914  (mean)
                  2010.year       =    .0463362  (mean)
```

	df	chi2	P>chi2
_at	**1**	**11.01**	**0.0009**

	Delta-method Contrast	Std. Err.	z	P>|z|	[90% Conf.	Interval]
_at (2 vs base)	**.1609798**	**.0485133**	**3.32**	**0.001**	**.0811824**	**.2407771**

```
106 estimates store margins_2

107
108 xtreg pers_2pl l2.oil_new l2.lincome_new l.popmad_adj l.gwf_firstldr l.logdur i.year
  >  if year>1991 & oil_new<8.120672, fe robust

  Fixed-effects (within) regression               Number of obs      =       928
  Group variable: gwf_caseid                      Number of groups   =        89

  R-sq:                                           Obs per group:
       within  = 0.1631                                         min =         1
       between = 0.3209                                         avg =      10.4
       overall = 0.2614                                         max =        19

                                                  F(23,88)           =      5.00
  corr(u_i, Xb)  = -0.0783                        Prob > F           =    0.0000
```

(Std. Err. adjusted for **89** clusters in gwf_caseid)

pers_2pl	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	**.0365001**	**.0207211**	**1.76**	**0.082**	**-.0046788**	**.0776789**
lincome_new L2.	**-.0667334**	**.2158293**	**-0.31**	**0.758**	**-.4956489**	**.362182**
popmad_adj L1.	**-.0021856**	**.0016725**	**-1.31**	**0.195**	**-.0055094**	**.0011383**
gwf_firstldr L1.	**.2783048**	**.1880725**	**1.48**	**0.143**	**-.0954498**	**.6520593**
logdur L1.	**.1315194**	**.0396351**	**3.32**	**0.001**	**.052753**	**.2102858**
year						
1993	**.0515863**	**.0334359**	**1.54**	**0.126**	**-.0148605**	**.1180331**
1994	**-.0056956**	**.0603191**	**-0.09**	**0.925**	**-.1255672**	**.114176**
1995	**.0164456**	**.0587182**	**0.28**	**0.780**	**-.1002444**	**.1331356**
1996	**.0351326**	**.0633585**	**0.55**	**0.581**	**-.090779**	**.1610443**
1997	**.0108961**	**.0612461**	**0.18**	**0.859**	**-.1108178**	**.1326099**
1998	**-.0018294**	**.0655861**	**-0.03**	**0.978**	**-.132168**	**.1285093**
1999	**-.0564572**	**.0933372**	**-0.60**	**0.547**	**-.2419452**	**.1290308**
2000	**.0031398**	**.0748847**	**0.04**	**0.967**	**-.1456778**	**.1519573**
2001	**.0193733**	**.0772439**	**0.25**	**0.803**	**-.1341328**	**.1728793**
2002	**-.023388**	**.0714948**	**-0.33**	**0.744**	**-.1654689**	**.118693**
2003	**.0176409**	**.0808897**	**0.22**	**0.828**	**-.1431104**	**.1783921**
2004	**-.026216**	**.0882592**	**-0.30**	**0.767**	**-.2016125**	**.1491806**
2005	**.0062622**	**.0842197**	**0.07**	**0.941**	**-.1611067**	**.1736311**
2006	**-.0334849**	**.1005017**	**-0.33**	**0.740**	**-.2332109**	**.1662411**
2007	**.0112073**	**.1084749**	**0.10**	**0.918**	**-.2043637**	**.2267784**
2008	**-.0027073**	**.1128141**	**-0.02**	**0.981**	**-.2269016**	**.2214871**
2009	**.0003475**	**.1196883**	**0.00**	**0.998**	**-.2375079**	**.2382029**
2010	**.0650016**	**.1333348**	**0.49**	**0.627**	**-.1999732**	**.3299764**
_cons	**.2560418**	**1.637153**	**0.16**	**0.876**	**-2.997456**	**3.509539**
sigma_u	**.63603138**					
sigma_e	**.2792799**					
rho	**.83835875**	(fraction of variance due to u_i)				

109 margins, at(l.gwf_firstldr=(0,1)) atmeans level(90) contrast(at effects) post

Contrasts of adjusted predictions
Model VCE : **Robust**

Expression : **Linear prediction, predict()**

1._at : L2.oil_new = **2.431715** (mean)
L2.lincome~w = **8.056082** (mean)
L.popmad_adj = **47.56685** (mean)
L.gwf_firs~r = **0**
L.logdur = **2.117583** (mean)
1992.year = **.0538793** (mean)
1993.year = **.0549569** (mean)
1994.year = **.0538793** (mean)
1995.year = **.0528017** (mean)
1996.year = **.0538793** (mean)
1997.year = **.0581897** (mean)
1998.year = **.0592672** (mean)
1999.year = **.0592672** (mean)
2000.year = **.0560345** (mean)
2001.year = **.0538793** (mean)
2002.year = **.0571121** (mean)
2003.year = **.0549569** (mean)
2004.year = **.049569** (mean)

```
                2005.year       =    .0484914  (mean)
                2006.year       =    .0484914  (mean)
                2007.year       =    .0463362  (mean)
                2008.year       =     .044181  (mean)
                2009.year       =    .0484914  (mean)
                2010.year       =    .0463362  (mean)

2._at           : L2.oil_new    =    2.431715  (mean)
                  L2.lincome~w  =    8.056082  (mean)
                  L.popmad_adj  =    47.56685  (mean)
                  L.gwf_firs~r  =           1
                  L.logdur      =    2.117583  (mean)
                  1992.year     =    .0538793  (mean)
                  1993.year     =    .0549569  (mean)
                  1994.year     =    .0538793  (mean)
                  1995.year     =    .0528017  (mean)
                  1996.year     =    .0538793  (mean)
                  1997.year     =    .0581897  (mean)
                  1998.year     =    .0592672  (mean)
                  1999.year     =    .0592672  (mean)
                  2000.year     =    .0560345  (mean)
                  2001.year     =    .0538793  (mean)
                  2002.year     =    .0571121  (mean)
                  2003.year     =    .0549569  (mean)
                  2004.year     =     .049569  (mean)
                  2005.year     =    .0484914  (mean)
                  2006.year     =    .0484914  (mean)
                  2007.year     =    .0463362  (mean)
                  2008.year     =     .044181  (mean)
                  2009.year     =    .0484914  (mean)
                  2010.year     =    .0463362  (mean)
```

	df	chi2	P>chi2
_at	**1**	**2.19**	**0.1389**

	Delta-method Contrast	Std. Err.	z	P>|z|	[90% Conf.	Interval]
_at (2 vs base)	**.2783048**	**.1880725**	**1.48**	**0.139**	**-.0310469**	**.5876565**

```
110 estimates store margins_3

111
112 *Model 3
113 xtreg pers_2pl l2.oil_new l2.lincome_new l.popmad_adj l.gwf_firstldr l.logdur l2.in_
  > pctgdp l2.tax i.year if year>1991, fe robust

  Fixed-effects (within) regression               Number of obs     =         844
  Group variable: gwf_caseid                      Number of groups  =          83

  R-sq:                                           Obs per group:
       within  = 0.1649                                         min =           1
       between = 0.3249                                         avg =        10.2
       overall = 0.3250                                         max =          19

                                                  F(25,82)          =       17.09
  corr(u_i, Xb)  = -0.0398                        Prob > F          =      0.0000
```

(Std. Err. adjusted for **83** clusters in gwf_caseid)

pers_2pl	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	.0693086	.0266759	2.60	0.011	.0162418	.1223754
lincome_new L2.	-.3129442	.3574862	-0.88	0.384	-1.024098	.3982099
popmad_adj L1.	-.0014607	.0025624	-0.57	0.570	-.0065582	.0036368
gwf_firstldr L1.	.3655374	.2188461	1.67	0.099	-.0698172	.800892
logdur L1.	.0916774	.0383288	2.39	0.019	.0154292	.1679256
in_pctgdp L2.	-.0003706	.0034489	-0.11	0.915	-.0072315	.0064904
tax L2.	.004732	.0070564	0.67	0.504	-.0093053	.0187694
year						
1993	.0866388	.050058	1.73	0.087	-.0129425	.18622
1994	.0635544	.0705846	0.90	0.371	-.0768609	.2039697
1995	.0763768	.0677174	1.13	0.263	-.0583348	.2110883
1996	.0927543	.074994	1.24	0.220	-.0564327	.2419413
1997	.0592702	.0731623	0.81	0.420	-.086273	.2048134
1998	.0381476	.0771044	0.49	0.622	-.1152377	.1915328
1999	.005904	.1087096	0.05	0.957	-.2103541	.2221621
2000	.0524913	.0927076	0.57	0.573	-.1319336	.2369162
2001	.0553037	.0960863	0.58	0.566	-.1358425	.2464499
2002	-.002778	.0895339	-0.03	0.975	-.1808895	.1753334
2003	.054405	.1016643	0.54	0.594	-.1478376	.2566476
2004	.0165589	.0920365	0.18	0.858	-.1665309	.1996488
2005	.069014	.1049598	0.66	0.513	-.1397844	.2778124
2006	.0292076	.1269501	0.23	0.819	-.2233366	.2817519
2007	.0647375	.1351628	0.48	0.633	-.2041444	.3336195
2008	.0741608	.1511297	0.49	0.625	-.2264844	.374806
2009	.0712779	.1686263	0.42	0.674	-.2641736	.4067294
2010	.1003215	.1761879	0.57	0.571	-.2501723	.4508153
_cons	2.094625	2.790642	0.75	0.455	-3.456851	7.646101
sigma_u	.60870586					
sigma_e	.27829424					
rho	.82711432	(fraction of variance due to u_i)				

114 centile oil_new logdur gwf_firstldr if e(sample), centile(25 75)

Variable	Obs	Percentile	Centile	Binom. Interp. [95% Conf.	Interval]
oil_new	844	25	0	0	0
		75	6.342112	6.080718	6.688444
logdur	844	25	1.609438	1.609438	1.791759
		75	2.890372	2.833213	2.995732
gwf_firstldr	844	25	0	0	0
		75	1	1	1

```
115
116 margins, at(l2.oil_new=(0,5.025)) atmeans level(90) contrast(at effects) post

  Contrasts of adjusted predictions
  Model VCE    : Robust

  Expression   : Linear prediction, predict()

  1._at        : L2.oil_new      =           0
                 L2.lincome~w    =     8.40582  (mean)
                 L.popmad_adj    =    48.41121  (mean)
                 L.gwf_firs~r    =     .436019  (mean)
                 L.logdur        =    2.178983  (mean)
                 L2.in_pctgdp    =    3.793804  (mean)
                 L2.tax          =    13.90792  (mean)
                 1992.year       =    .0438389  (mean)
                 1993.year       =    .0473934  (mean)
                 1994.year       =     .042654  (mean)
                 1995.year       =    .0402844  (mean)
                 1996.year       =     .042654  (mean)
                 1997.year       =    .0473934  (mean)
                 1998.year       =    .0509479  (mean)
                 1999.year       =    .0545024  (mean)
                 2000.year       =    .0533175  (mean)
                 2001.year       =    .0509479  (mean)
                 2002.year       =    .0592417  (mean)
                 2003.year       =    .0604265  (mean)
                 2004.year       =    .0592417  (mean)
                 2005.year       =    .0592417  (mean)
                 2006.year       =    .0580569  (mean)
                 2007.year       =     .056872  (mean)
                 2008.year       =    .0592417  (mean)
                 2009.year       =     .056872  (mean)
                 2010.year       =     .056872  (mean)

  2._at        : L2.oil_new      =       5.025
                 L2.lincome~w    =     8.40582  (mean)
                 L.popmad_adj    =    48.41121  (mean)
                 L.gwf_firs~r    =     .436019  (mean)
                 L.logdur        =    2.178983  (mean)
                 L2.in_pctgdp    =    3.793804  (mean)
                 L2.tax          =    13.90792  (mean)
                 1992.year       =    .0438389  (mean)
                 1993.year       =    .0473934  (mean)
                 1994.year       =     .042654  (mean)
                 1995.year       =    .0402844  (mean)
                 1996.year       =     .042654  (mean)
                 1997.year       =    .0473934  (mean)
                 1998.year       =    .0509479  (mean)
                 1999.year       =    .0545024  (mean)
                 2000.year       =    .0533175  (mean)
                 2001.year       =    .0509479  (mean)
                 2002.year       =    .0592417  (mean)
                 2003.year       =    .0604265  (mean)
                 2004.year       =    .0592417  (mean)
                 2005.year       =    .0592417  (mean)
                 2006.year       =    .0580569  (mean)
                 2007.year       =     .056872  (mean)
                 2008.year       =    .0592417  (mean)
                 2009.year       =     .056872  (mean)
                 2010.year       =     .056872  (mean)

------------------------------------------------------------------------------
             |          df        chi2     P>chi2
-------------+----------------------------------------------------------------
         _at |           1        6.75     0.0094
------------------------------------------------------------------------------
```

	Contrast	Delta-method Std. Err.	z	P>|z|	[90% Conf.	Interval]
_at (2 vs base)	**.3482758**	**.1340463**	**2.60**	**0.009**	**.1277893**	**.5687623**

```
117 estimates store margins_4

118
119 xtreg pers_2pl l2.oil_new l2.lincome_new l.popmad_adj l.gwf_firstldr l.logdur l2.in_
  > pctgdp l2.tax i.year if year>1991, fe robust

Fixed-effects (within) regression               Number of obs      =       844
Group variable: gwf_caseid                      Number of groups   =        83

R-sq:                                           Obs per group:
     within  = 0.1649                                         min =         1
     between = 0.3249                                         avg =      10.2
     overall = 0.3250                                         max =        19

                                                F(25,82)           =     17.09
corr(u_i, Xb)  = -0.0398                        Prob > F           =    0.0000

                              (Std. Err. adjusted for 83 clusters in gwf_caseid)
```

pers_2pl	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	**.0693086**	**.0266759**	**2.60**	**0.011**	**.0162418**	**.1223754**
lincome_new L2.	**-.3129442**	**.3574862**	**-0.88**	**0.384**	**-1.024098**	**.3982099**
popmad_adj L1.	**-.0014607**	**.0025624**	**-0.57**	**0.570**	**-.0065582**	**.0036368**
gwf_firstldr L1.	**.3655374**	**.2188461**	**1.67**	**0.099**	**-.0698172**	**.800892**
logdur L1.	**.0916774**	**.0383288**	**2.39**	**0.019**	**.0154292**	**.1679256**
in_pctgdp L2.	**-.0003706**	**.0034489**	**-0.11**	**0.915**	**-.0072315**	**.0064904**
tax L2.	**.004732**	**.0070564**	**0.67**	**0.504**	**-.0093053**	**.0187694**
year						
1993	**.0866388**	**.050058**	**1.73**	**0.087**	**-.0129425**	**.18622**
1994	**.0635544**	**.0705846**	**0.90**	**0.371**	**-.0768609**	**.2039697**
1995	**.0763768**	**.0677174**	**1.13**	**0.263**	**-.0583348**	**.2110883**
1996	**.0927543**	**.074994**	**1.24**	**0.220**	**-.0564327**	**.2419413**
1997	**.0592702**	**.0731623**	**0.81**	**0.420**	**-.086273**	**.2048134**
1998	**.0381476**	**.0771044**	**0.49**	**0.622**	**-.1152377**	**.1915328**
1999	**.005904**	**.1087096**	**0.05**	**0.957**	**-.2103541**	**.2221621**
2000	**.0524913**	**.0927076**	**0.57**	**0.573**	**-.1319336**	**.2369162**
2001	**.0553037**	**.0960863**	**0.58**	**0.566**	**-.1358425**	**.2464499**
2002	**-.002778**	**.0895339**	**-0.03**	**0.975**	**-.1808895**	**.1753334**
2003	**.054405**	**.1016643**	**0.54**	**0.594**	**-.1478376**	**.2566476**
2004	**.0165589**	**.0920365**	**0.18**	**0.858**	**-.1665309**	**.1996488**
2005	**.069014**	**.1049598**	**0.66**	**0.513**	**-.1397844**	**.2778124**
2006	**.0292076**	**.1269501**	**0.23**	**0.819**	**-.2233366**	**.2817519**
2007	**.0647375**	**.1351628**	**0.48**	**0.633**	**-.2041444**	**.3336195**
2008	**.0741608**	**.1511297**	**0.49**	**0.625**	**-.2264844**	**.374806**
2009	**.0712779**	**.1686263**	**0.42**	**0.674**	**-.2641736**	**.4067294**
2010	**.1003215**	**.1761879**	**0.57**	**0.571**	**-.2501723**	**.4508153**
_cons	**2.094625**	**2.790642**	**0.75**	**0.455**	**-3.456851**	**7.646101**

sigma_u	**.60870586**
sigma_e	**.27829424**
rho	**.82711432** (fraction of variance due to u_i)

```
120 margins, at(l.logdur=(1.609,2.890)) atmeans level(90) contrast(at effects) post

  Contrasts of adjusted predictions
  Model VCE    : Robust

  Expression   : Linear prediction, predict()

  1._at        : L2.oil_new      =    3.300221 (mean)
                 L2.lincome~w    =     8.40582 (mean)
                 L.popmad_adj    =    48.41121 (mean)
                 L.gwf_firs~r    =     .436019 (mean)
                 L.logdur        =       1.609
                 L2.in_pctgdp    =    3.793804 (mean)
                 L2.tax          =    13.90792 (mean)
                 1992.year       =    .0438389 (mean)
                 1993.year       =    .0473934 (mean)
                 1994.year       =     .042654 (mean)
                 1995.year       =    .0402844 (mean)
                 1996.year       =     .042654 (mean)
                 1997.year       =    .0473934 (mean)
                 1998.year       =    .0509479 (mean)
                 1999.year       =    .0545024 (mean)
                 2000.year       =    .0533175 (mean)
                 2001.year       =    .0509479 (mean)
                 2002.year       =    .0592417 (mean)
                 2003.year       =    .0604265 (mean)
                 2004.year       =    .0592417 (mean)
                 2005.year       =    .0592417 (mean)
                 2006.year       =    .0580569 (mean)
                 2007.year       =     .056872 (mean)
                 2008.year       =    .0592417 (mean)
                 2009.year       =     .056872 (mean)
                 2010.year       =     .056872 (mean)

  2._at        : L2.oil_new      =    3.300221 (mean)
                 L2.lincome~w    =     8.40582 (mean)
                 L.popmad_adj    =    48.41121 (mean)
                 L.gwf_firs~r    =     .436019 (mean)
                 L.logdur        =        2.89
                 L2.in_pctgdp    =    3.793804 (mean)
                 L2.tax          =    13.90792 (mean)
                 1992.year       =    .0438389 (mean)
                 1993.year       =    .0473934 (mean)
                 1994.year       =     .042654 (mean)
                 1995.year       =    .0402844 (mean)
                 1996.year       =     .042654 (mean)
                 1997.year       =    .0473934 (mean)
                 1998.year       =    .0509479 (mean)
                 1999.year       =    .0545024 (mean)
                 2000.year       =    .0533175 (mean)
                 2001.year       =    .0509479 (mean)
                 2002.year       =    .0592417 (mean)
                 2003.year       =    .0604265 (mean)
                 2004.year       =    .0592417 (mean)
                 2005.year       =    .0592417 (mean)
                 2006.year       =    .0580569 (mean)
                 2007.year       =     .056872 (mean)
                 2008.year       =    .0592417 (mean)
                 2009.year       =     .056872 (mean)
                 2010.year       =     .056872 (mean)
```

	df	chi2	P>chi2
_at	**1**	**5.72**	**0.0168**

	Contrast	Delta-method Std. Err.	z	P>|z|	[90% Conf.	Interval]
_at (2 vs base)	**.1174388**	**.0490992**	**2.39**	**0.017**	**.0366778**	**.1981998**

```
121 estimates store margins_5

122
123 xtreg pers_2pl l2.oil_new l2.lincome_new l.popmad_adj l.gwf_firstldr l.logdur l2.in_
  > pctgdp l2.tax i.year if year>1991, fe robust

Fixed-effects (within) regression               Number of obs      =       844
Group variable: gwf_caseid                      Number of groups   =        83

R-sq:                                           Obs per group:
     within  = 0.1649                                         min =         1
     between = 0.3249                                         avg =      10.2
     overall = 0.3250                                         max =        19

                                                F(25,82)           =     17.09
corr(u_i, Xb)  = -0.0398                        Prob > F           =    0.0000

                              (Std. Err. adjusted for 83 clusters in gwf_caseid)
```

pers_2pl	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	**.0693086**	**.0266759**	**2.60**	**0.011**	**.0162418**	**.1223754**
lincome_new L2.	**-.3129442**	**.3574862**	**-0.88**	**0.384**	**-1.024098**	**.3982099**
popmad_adj L1.	**-.0014607**	**.0025624**	**-0.57**	**0.570**	**-.0065582**	**.0036368**
gwf_firstldr L1.	**.3655374**	**.2188461**	**1.67**	**0.099**	**-.0698172**	**.800892**
logdur L1.	**.0916774**	**.0383288**	**2.39**	**0.019**	**.0154292**	**.1679256**
in_pctgdp L2.	**-.0003706**	**.0034489**	**-0.11**	**0.915**	**-.0072315**	**.0064904**
tax L2.	**.004732**	**.0070564**	**0.67**	**0.504**	**-.0093053**	**.0187694**
year						
1993	**.0866388**	**.050058**	**1.73**	**0.087**	**-.0129425**	**.18622**
1994	**.0635544**	**.0705846**	**0.90**	**0.371**	**-.0768609**	**.2039697**
1995	**.0763768**	**.0677174**	**1.13**	**0.263**	**-.0583348**	**.2110883**
1996	**.0927543**	**.074994**	**1.24**	**0.220**	**-.0564327**	**.2419413**
1997	**.0592702**	**.0731623**	**0.81**	**0.420**	**-.086273**	**.2048134**
1998	**.0381476**	**.0771044**	**0.49**	**0.622**	**-.1152377**	**.1915328**
1999	**.005904**	**.1087096**	**0.05**	**0.957**	**-.2103541**	**.2221621**
2000	**.0524913**	**.0927076**	**0.57**	**0.573**	**-.1319336**	**.2369162**
2001	**.0553037**	**.0960863**	**0.58**	**0.566**	**-.1358425**	**.2464499**
2002	**-.002778**	**.0895339**	**-0.03**	**0.975**	**-.1808895**	**.1753334**
2003	**.054405**	**.1016643**	**0.54**	**0.594**	**-.1478376**	**.2566476**
2004	**.0165589**	**.0920365**	**0.18**	**0.858**	**-.1665309**	**.1996488**
2005	**.069014**	**.1049598**	**0.66**	**0.513**	**-.1397844**	**.2778124**
2006	**.0292076**	**.1269501**	**0.23**	**0.819**	**-.2233366**	**.2817519**

2007	.0647375	.1351628	0.48	0.633	-.2041444	.3336195
2008	.0741608	.1511297	0.49	0.625	-.2264844	.374806
2009	.0712779	.1686263	0.42	0.674	-.2641736	.4067294
2010	.1003215	.1761879	0.57	0.571	-.2501723	.4508153
_cons	2.094625	2.790642	0.75	0.455	-3.456851	7.646101

sigma_u	.60870586	
sigma_e	.27829424	
rho	.82711432	(fraction of variance due to u_i)

124 margins, at(l.gwf_firstldr=(0,1)) atmeans level(90) contrast(at effects) post

Contrasts of adjusted predictions
Model VCE : **Robust**

Expression : **Linear prediction, predict()**

1._at : L2.oil_new = **3.300221** (mean)
L2.lincome~w = **8.40582** (mean)
L.popmad_adj = **48.41121** (mean)
L.gwf_firs~r = **0**
L.logdur = **2.178983** (mean)
L2.in_pctgdp = **3.793804** (mean)
L2.tax = **13.90792** (mean)
1992.year = **.0438389** (mean)
1993.year = **.0473934** (mean)
1994.year = **.042654** (mean)
1995.year = **.0402844** (mean)
1996.year = **.042654** (mean)
1997.year = **.0473934** (mean)
1998.year = **.0509479** (mean)
1999.year = **.0545024** (mean)
2000.year = **.0533175** (mean)
2001.year = **.0509479** (mean)
2002.year = **.0592417** (mean)
2003.year = **.0604265** (mean)
2004.year = **.0592417** (mean)
2005.year = **.0592417** (mean)
2006.year = **.0580569** (mean)
2007.year = **.056872** (mean)
2008.year = **.0592417** (mean)
2009.year = **.056872** (mean)
2010.year = **.056872** (mean)

2._at : L2.oil_new = **3.300221** (mean)
L2.lincome~w = **8.40582** (mean)
L.popmad_adj = **48.41121** (mean)
L.gwf_firs~r = **1**
L.logdur = **2.178983** (mean)
L2.in_pctgdp = **3.793804** (mean)
L2.tax = **13.90792** (mean)
1992.year = **.0438389** (mean)
1993.year = **.0473934** (mean)
1994.year = **.042654** (mean)
1995.year = **.0402844** (mean)
1996.year = **.042654** (mean)
1997.year = **.0473934** (mean)
1998.year = **.0509479** (mean)
1999.year = **.0545024** (mean)
2000.year = **.0533175** (mean)
2001.year = **.0509479** (mean)
2002.year = **.0592417** (mean)
2003.year = **.0604265** (mean)
2004.year = **.0592417** (mean)
2005.year = **.0592417** (mean)
2006.year = **.0580569** (mean)
2007.year = **.056872** (mean)
2008.year = **.0592417** (mean)
2009.year = **.056872** (mean)
2010.year = **.056872** (mean)

	df	chi2	P>chi2
_at	**1**	**2.79**	**0.0949**

	Contrast	Delta-method Std. Err.	z	P>|z|	[90% Conf.	Interval]
_at (2 vs base)	**.3655374**	**.2188461**	**1.67**	**0.095**	**.0055677**	**.7255072**

```
125 estimates store margins_6

126
127 *Model 4
128 xtreg pers_2pl l2.oil_new l2.lincome_new l.popmad_adj l.gwf_firstldr l.logdur l2.in_
  > pctgdp l2.tax i.year if year>1991 & oil_new<8.347798, fe robust

Fixed-effects (within) regression               Number of obs      =       760
Group variable: gwf_caseid                      Number of groups   =        81

R-sq:                                           Obs per group:
     within  = 0.1909                                         min =         1
     between = 0.3720                                         avg =       9.4
     overall = 0.3547                                         max =        19

                                                F(25,80)           =     16.70
corr(u_i, Xb)  = -0.0316                        Prob > F           =     0.0000

                                (Std. Err. adjusted for 81 clusters in gwf_caseid)
```

pers_2pl	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	**.0711386**	**.0275389**	**2.58**	**0.012**	**.0163344**	**.1259429**
lincome_new L2.	**-.2529314**	**.3955894**	**-0.64**	**0.524**	**-1.040179**	**.5343167**
popmad_adj L1.	**-.0016414**	**.0026398**	**-0.62**	**0.536**	**-.0068947**	**.0036119**
gwf_firstldr L1.	**.4231833**	**.2198957**	**1.92**	**0.058**	**-.0144231**	**.8607897**
logdur L1.	**.1161813**	**.0418152**	**2.78**	**0.007**	**.0329665**	**.1993962**
in_pctgdp L2.	**-.0013726**	**.0034941**	**-0.39**	**0.695**	**-.0083261**	**.0055808**
tax L2.	**.0043255**	**.0077421**	**0.56**	**0.578**	**-.0110819**	**.0197328**
year						
1993	**.0965603**	**.0538226**	**1.79**	**0.077**	**-.01055**	**.2036706**
1994	**.0694321**	**.0757247**	**0.92**	**0.362**	**-.0812649**	**.2201291**
1995	**.0815343**	**.0726981**	**1.12**	**0.265**	**-.0631395**	**.2262081**
1996	**.0993243**	**.0803117**	**1.24**	**0.220**	**-.0605011**	**.2591497**
1997	**.0569978**	**.0778548**	**0.73**	**0.466**	**-.0979381**	**.2119337**
1998	**.0308055**	**.0823533**	**0.37**	**0.709**	**-.1330828**	**.1946937**
1999	**-.0067521**	**.1156728**	**-0.06**	**0.954**	**-.2369482**	**.2234441**
2000	**.0360049**	**.0991533**	**0.36**	**0.717**	**-.1613164**	**.2333263**
2001	**.0482986**	**.1040229**	**0.46**	**0.644**	**-.1587136**	**.2553109**
2002	**-.0183069**	**.0992014**	**-0.18**	**0.854**	**-.2157239**	**.1791102**
2003	**.045758**	**.1141852**	**0.40**	**0.690**	**-.1814778**	**.2729939**
2004	**.0080158**	**.1078413**	**0.07**	**0.941**	**-.2065952**	**.2226268**

2005	.0690997	.1272167	0.54	0.589	-.1840696	.322269
2006	.0038343	.1516498	0.03	0.980	-.2979585	.3056271
2007	.044533	.1609437	0.28	0.783	-.275755	.3648211
2008	.0433962	.1886337	0.23	0.819	-.3319969	.4187893
2009	.0423452	.2034858	0.21	0.836	-.3626046	.4472949
2010	.0812097	.2140981	0.38	0.705	-.3448591	.5072786
_cons	1.516182	2.983415	0.51	0.613	-4.421004	7.453367

sigma_u	.59491306	
sigma_e	.28789623	
rho	.81024922	(fraction of variance due to u_i)

```
129 centile oil_new logdur gwf_firstldr if e(sample), centile(25 75)
```

Variable	Obs	Percentile	Centile	Binom. Interp. [95% Conf.	Interval]
oil_new	760	25	0	0	0
		75	5.546073	4.948095	5.887354
logdur	760	25	1.609438	1.386294	1.609438
		75	2.833213	2.772589	2.890372
gwf_firstldr	760	25	0	0	0
		75	1	1	1

```
130
131 margins, at(l2.oil_new=(0,5.546)) atmeans level(90) contrast(at effects) post

  Contrasts of adjusted predictions
  Model VCE    : Robust

  Expression   : Linear prediction, predict()

  1._at        : L2.oil_new      =           0
                 L2.lincome~w    =    8.157192 (mean)
                 L.popmad_adj    =    52.93633 (mean)
                 L.gwf_firs~r    =         .45 (mean)
                 L.logdur        =    2.114955 (mean)
                 L2.in_pctgdp    =    3.940012 (mean)
                 L2.tax          =    14.63909 (mean)
                 1992.year       =    .0460526 (mean)
                 1993.year       =         .05 (mean)
                 1994.year       =    .0447368 (mean)
                 1995.year       =    .0421053 (mean)
                 1996.year       =    .0434211 (mean)
                 1997.year       =    .0473684 (mean)
                 1998.year       =    .0539474 (mean)
                 1999.year       =    .0578947 (mean)
                 2000.year       =    .0539474 (mean)
                 2001.year       =    .0513158 (mean)
                 2002.year       =    .0605263 (mean)
                 2003.year       =    .0618421 (mean)
                 2004.year       =    .0578947 (mean)
                 2005.year       =    .0565789 (mean)
                 2006.year       =    .0552632 (mean)
                 2007.year       =    .0539474 (mean)
                 2008.year       =    .0526316 (mean)
                 2009.year       =    .0552632 (mean)
                 2010.year       =    .0552632 (mean)
```

```
2._at          : L2.oil_new       =       5.546
                 L2.lincome~w     =    8.157192  (mean)
                 L.popmad_adj     =    52.93633  (mean)
                 L.gwf_firs~r     =         .45  (mean)
                 L.logdur         =    2.114955  (mean)
                 L2.in_pctgdp     =    3.940012  (mean)
                 L2.tax           =    14.63909  (mean)
                 1992.year        =    .0460526  (mean)
                 1993.year        =         .05  (mean)
                 1994.year        =    .0447368  (mean)
                 1995.year        =    .0421053  (mean)
                 1996.year        =    .0434211  (mean)
                 1997.year        =    .0473684  (mean)
                 1998.year        =    .0539474  (mean)
                 1999.year        =    .0578947  (mean)
                 2000.year        =    .0539474  (mean)
                 2001.year        =    .0513158  (mean)
                 2002.year        =    .0605263  (mean)
                 2003.year        =    .0618421  (mean)
                 2004.year        =    .0578947  (mean)
                 2005.year        =    .0565789  (mean)
                 2006.year        =    .0552632  (mean)
                 2007.year        =    .0539474  (mean)
                 2008.year        =    .0526316  (mean)
                 2009.year        =    .0552632  (mean)
                 2010.year        =    .0552632  (mean)
```

	df	chi2	P>chi2
_at	**1**	**6.67**	**0.0098**

	Contrast	Delta-method Std. Err.	z	P>|z|	[90% Conf.	Interval]
_at (2 vs base)	**.3945347**	**.152731**	**2.58**	**0.010**	**.1433146**	**.6457549**

```
132 estimates store margins_7

133
134 xtreg pers_2pl l2.oil_new l2.lincome_new l.popmad_adj l.gwf_firstldr l.logdur l2.in_
  > pctgdp l2.tax i.year if year>1991 & oil_new<8.347798, fe robust

  Fixed-effects (within) regression               Number of obs      =       760
  Group variable: gwf_caseid                      Number of groups   =        81

  R-sq:                                           Obs per group:
       within  = 0.1909                                         min =         1
       between = 0.3720                                         avg =       9.4
       overall = 0.3547                                         max =        19

                                                  F(25,80)           =     16.70
  corr(u_i, Xb)  = -0.0316                        Prob > F           =    0.0000

                              (Std. Err. adjusted for 81 clusters in gwf_caseid)
```

pers_2pl	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	**.0711386**	**.0275389**	**2.58**	**0.012**	**.0163344**	**.1259429**
lincome_new L2.	**-.2529314**	**.3955894**	**-0.64**	**0.524**	**-1.040179**	**.5343167**
popmad_adj L1.	**-.0016414**	**.0026398**	**-0.62**	**0.536**	**-.0068947**	**.0036119**

gwf_firstldr						
L1.	.4231833	.2198957	1.92	0.058	-.0144231	.8607897
logdur						
L1.	.1161813	.0418152	2.78	0.007	.0329665	.1993962
in_pctgdp						
L2.	-.0013726	.0034941	-0.39	0.695	-.0083261	.0055808
tax						
L2.	.0043255	.0077421	0.56	0.578	-.0110819	.0197328
year						
1993	.0965603	.0538226	1.79	0.077	-.01055	.2036706
1994	.0694321	.0757247	0.92	0.362	-.0812649	.2201291
1995	.0815343	.0726981	1.12	0.265	-.0631395	.2262081
1996	.0993243	.0803117	1.24	0.220	-.0605011	.2591497
1997	.0569978	.0778548	0.73	0.466	-.0979381	.2119337
1998	.0308055	.0823533	0.37	0.709	-.1330828	.1946937
1999	-.0067521	.1156728	-0.06	0.954	-.2369482	.2234441
2000	.0360049	.0991533	0.36	0.717	-.1613164	.2333263
2001	.0482986	.1040229	0.46	0.644	-.1587136	.2553109
2002	-.0183069	.0992014	-0.18	0.854	-.2157239	.1791102
2003	.045758	.1141852	0.40	0.690	-.1814778	.2729939
2004	.0080158	.1078413	0.07	0.941	-.2065952	.2226268
2005	.0690997	.1272167	0.54	0.589	-.1840696	.322269
2006	.0038343	.1516498	0.03	0.980	-.2979585	.3056271
2007	.044533	.1609437	0.28	0.783	-.275755	.3648211
2008	.0433962	.1886337	0.23	0.819	-.3319969	.4187893
2009	.0423452	.2034858	0.21	0.836	-.3626046	.4472949
2010	.0812097	.2140981	0.38	0.705	-.3448591	.5072786
_cons	1.516182	2.983415	0.51	0.613	-4.421004	7.453367
sigma_u	.59491306					
sigma_e	.28789623					
rho	.81024922	(fraction of variance due to u_i)				

135 margins, at(l.logdur=(1.609,2.833)) atmeans level(90) contrast(at effects) post

Contrasts of adjusted predictions
Model VCE : **Robust**

Expression : **Linear prediction, predict()**

1._at : L2.oil_new = **2.667525** (mean)
L2.lincome~w = **8.157192** (mean)
L.popmad_adj = **52.93633** (mean)
L.gwf_firs~r = **.45** (mean)
L.logdur = **1.609**
L2.in_pctgdp = **3.940012** (mean)
L2.tax = **14.63909** (mean)
1992.year = **.0460526** (mean)
1993.year = **.05** (mean)
1994.year = **.0447368** (mean)
1995.year = **.0421053** (mean)
1996.year = **.0434211** (mean)
1997.year = **.0473684** (mean)
1998.year = **.0539474** (mean)
1999.year = **.0578947** (mean)
2000.year = **.0539474** (mean)
2001.year = **.0513158** (mean)
2002.year = **.0605263** (mean)
2003.year = **.0618421** (mean)
2004.year = **.0578947** (mean)
2005.year = **.0565789** (mean)
2006.year = **.0552632** (mean)
2007.year = **.0539474** (mean)
2008.year = **.0526316** (mean)
2009.year = **.0552632** (mean)
2010.year = **.0552632** (mean)

```
2._at          : L2.oil_new       =    2.667525 (mean)
                 L2.lincome~w     =    8.157192 (mean)
                 L.popmad_adj     =    52.93633 (mean)
                 L.gwf_firs~r     =         .45 (mean)
                 L.logdur         =       2.833
                 L2.in_pctgdp     =    3.940012 (mean)
                 L2.tax           =    14.63909 (mean)
                 1992.year        =    .0460526 (mean)
                 1993.year        =         .05 (mean)
                 1994.year        =    .0447368 (mean)
                 1995.year        =    .0421053 (mean)
                 1996.year        =    .0434211 (mean)
                 1997.year        =    .0473684 (mean)
                 1998.year        =    .0539474 (mean)
                 1999.year        =    .0578947 (mean)
                 2000.year        =    .0539474 (mean)
                 2001.year        =    .0513158 (mean)
                 2002.year        =    .0605263 (mean)
                 2003.year        =    .0618421 (mean)
                 2004.year        =    .0578947 (mean)
                 2005.year        =    .0565789 (mean)
                 2006.year        =    .0552632 (mean)
                 2007.year        =    .0539474 (mean)
                 2008.year        =    .0526316 (mean)
                 2009.year        =    .0552632 (mean)
                 2010.year        =    .0552632 (mean)
```

	df	chi2	P>chi2
_at	**1**	**7.72**	**0.0055**

	Contrast	Delta-method Std. Err.	z	P>|z|	[90% Conf.	Interval]
_at (2 vs base)	**.142206**	**.0511818**	**2.78**	**0.005**	**.0580194**	**.2263925**

```
136 estimates store margins_8

137
138 xtreg pers_2pl l2.oil_new l2.lincome_new l.popmad_adj l.gwf_firstldr l.logdur l2.in_
  > pctgdp l2.tax i.year if year>1991 & oil_new<8.347798, fe robust

Fixed-effects (within) regression               Number of obs      =       760
Group variable: gwf_caseid                      Number of groups   =        81

R-sq:                                           Obs per group:
     within  = 0.1909                                         min =         1
     between = 0.3720                                         avg =       9.4
     overall = 0.3547                                         max =        19

                                                F(25,80)           =     16.70
corr(u_i, Xb)  = -0.0316                        Prob > F           =    0.0000

                                (Std. Err. adjusted for 81 clusters in gwf_caseid)
```

pers_2pl	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	**.0711386**	**.0275389**	**2.58**	**0.012**	**.0163344**	**.1259429**
lincome_new L2.	**-.2529314**	**.3955894**	**-0.64**	**0.524**	**-1.040179**	**.5343167**
popmad_adj L1.	**-.0016414**	**.0026398**	**-0.62**	**0.536**	**-.0068947**	**.0036119**

gwf_firstldr L1.	.4231833	.2198957	1.92	0.058	-.0144231	.8607897
logdur L1.	.1161813	.0418152	2.78	0.007	.0329665	.1993962
in_pctgdp L2.	-.0013726	.0034941	-0.39	0.695	-.0083261	.0055808
tax L2.	.0043255	.0077421	0.56	0.578	-.0110819	.0197328
year						
1993	.0965603	.0538226	1.79	0.077	-.01055	.2036706
1994	.0694321	.0757247	0.92	0.362	-.0812649	.2201291
1995	.0815343	.0726981	1.12	0.265	-.0631395	.2262081
1996	.0993243	.0803117	1.24	0.220	-.0605011	.2591497
1997	.0569978	.0778548	0.73	0.466	-.0979381	.2119337
1998	.0308055	.0823533	0.37	0.709	-.1330828	.1946937
1999	-.0067521	.1156728	-0.06	0.954	-.2369482	.2234441
2000	.0360049	.0991533	0.36	0.717	-.1613164	.2333263
2001	.0482986	.1040229	0.46	0.644	-.1587136	.2553109
2002	-.0183069	.0992014	-0.18	0.854	-.2157239	.1791102
2003	.045758	.1141852	0.40	0.690	-.1814778	.2729939
2004	.0080158	.1078413	0.07	0.941	-.2065952	.2226268
2005	.0690997	.1272167	0.54	0.589	-.1840696	.322269
2006	.0038343	.1516498	0.03	0.980	-.2979585	.3056271
2007	.044533	.1609437	0.28	0.783	-.275755	.3648211
2008	.0433962	.1886337	0.23	0.819	-.3319969	.4187893
2009	.0423452	.2034858	0.21	0.836	-.3626046	.4472949
2010	.0812097	.2140981	0.38	0.705	-.3448591	.5072786
_cons	1.516182	2.983415	0.51	0.613	-4.421004	7.453367
sigma_u	.59491306					
sigma_e	.28789623					
rho	.81024922	(fraction of variance due to u_i)				

```
139 margins, at(l.gwf_firstldr=(0,1)) atmeans level(90) contrast(at effects) post

  Contrasts of adjusted predictions
  Model VCE    : Robust

  Expression   : Linear prediction, predict()

  1._at        : L2.oil_new      =    2.667525 (mean)
                 L2.lincome~w    =    8.157192 (mean)
                 L.popmad_adj    =    52.93633 (mean)
                 L.gwf_firs~r    =           0
                 L.logdur        =    2.114955 (mean)
                 L2.in_pctgdp    =    3.940012 (mean)
                 L2.tax          =    14.63909 (mean)
                 1992.year       =    .0460526 (mean)
                 1993.year       =         .05 (mean)
                 1994.year       =    .0447368 (mean)
                 1995.year       =    .0421053 (mean)
                 1996.year       =    .0434211 (mean)
                 1997.year       =    .0473684 (mean)
                 1998.year       =    .0539474 (mean)
                 1999.year       =    .0578947 (mean)
                 2000.year       =    .0539474 (mean)
                 2001.year       =    .0513158 (mean)
                 2002.year       =    .0605263 (mean)
                 2003.year       =    .0618421 (mean)
                 2004.year       =    .0578947 (mean)
                 2005.year       =    .0565789 (mean)
                 2006.year       =    .0552632 (mean)
                 2007.year       =    .0539474 (mean)
                 2008.year       =    .0526316 (mean)
                 2009.year       =    .0552632 (mean)
```

```
                2010.year       =    .0552632 (mean)

2._at         : L2.oil_new      =    2.667525 (mean)
                L2.lincome~w    =    8.157192 (mean)
                L.popmad_adj    =    52.93633 (mean)
                L.gwf_firs~r    =           1
                L.logdur        =    2.114955 (mean)
                L2.in_pctgdp    =    3.940012 (mean)
                L2.tax          =    14.63909 (mean)
                1992.year       =    .0460526 (mean)
                1993.year       =         .05 (mean)
                1994.year       =    .0447368 (mean)
                1995.year       =    .0421053 (mean)
                1996.year       =    .0434211 (mean)
                1997.year       =    .0473684 (mean)
                1998.year       =    .0539474 (mean)
                1999.year       =    .0578947 (mean)
                2000.year       =    .0539474 (mean)
                2001.year       =    .0513158 (mean)
                2002.year       =    .0605263 (mean)
                2003.year       =    .0618421 (mean)
                2004.year       =    .0578947 (mean)
                2005.year       =    .0565789 (mean)
                2006.year       =    .0552632 (mean)
                2007.year       =    .0539474 (mean)
                2008.year       =    .0526316 (mean)
                2009.year       =    .0552632 (mean)
                2010.year       =    .0552632 (mean)
```

	df	chi2	P>chi2
_at	**1**	**3.70**	**0.0543**

	Contrast	Delta-method Std. Err.	z	P>|z|	[90% Conf.	Interval]
_at (2 vs base)	**.4231833**	**.2198957**	**1.92**	**0.054**	**.0614871**	**.7848796**

```
140 estimates store margins_9

141
142 *Code to combine these marginal effects into Figure 2
143 coefplot ///
  > (margins_1, label("{bf:Oil Income,}{it: model 2}") m(O) offset(0.3)) ///
  > (margins_4, label("{it:model 3}") m(O) offset(0.275)) ///
  > (margins_7, label("{it:model 4}") m(O) offset(0.25)) ///
  > (margins_2, label("{bf:Leader Duration,}{it: model 2}") m(S) offset(0.025)) ///
  > (margins_5, label("{it:model 3}") m(S) offset(0)) ///
  > (margins_8, label("{it:model 4}") m(S) offset(-0.025)) ///
  > (margins_3, label("{bf:New Leader,}{it: model 2}") m(T) offset(-0.25)) ///
  > (margins_6, label("{it:model 3}") m(T) offset(-0.275)) ///
  > (margins_9, label("{it:model 4}") m(T) offset(-0.30)) ///
  > ,scheme(plotplain) xline(0) level(90) xtitle(Marginal Effect per IQR increase) ///
  > ytitle("Explanatory Variables") ///
  > ylabel(.) note("Note: Estimates are expressed as 90% confidence intervals of the cha
  > nge in" "the expected value of the dependent variable per interquartile range increa
  > se" "in the explantory variables. Predicted values calculated while holding" "all ot
  > her explanatory variables at mean values.")
```

```
144 graph save PersonalismFigure2, replace
  (file PersonalismFigure2.gph saved)

145
146 ***************
147 **ONLINE APPENDIX/SUPPLEMENTAL ANALYSES
148 ***************
149
150 *TABLE 1A, MODELS 1 AND 2 / MAIN RESULTS, RE-ESTIMATED IN SAMPLE COVERING 1980-2010
151 *Model 1 - Baseline specification, post1980
152 xtreg pers_2pl l2.oil_new l2.lgdppc l.popmad_adj l.gwf_firstldr l.logdur i.year if y
  > ear>=1980, fe robust

Fixed-effects (within) regression               Number of obs     =      1,720
Group variable: gwf_caseid                      Number of groups  =        130

R-sq:                                           Obs per group:
     within  = 0.0910                                         min =          1
     between = 0.1907                                         avg =       13.2
     overall = 0.1623                                         max =         30

                                                F(34,129)         =       1.71
corr(u_i, Xb)  = 0.2213                         Prob > F          =     0.0173

                              (Std. Err. adjusted for 130 clusters in gwf_caseid)
------------------------------------------------------------------------------
             |               Robust
    pers_2pl |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     oil_new |
         L2. |  -.0005791   .0254933    -0.02   0.982    -.0510183    .0498601
             |
      lgdppc |
         L2. |     .03655   .1272203     0.29   0.774    -.2151585    .2882585
             |
  popmad_adj |
         L1. |  -.0005916   .0008935    -0.66   0.509    -.0023595    .0011762
             |
gwf_firstldr |
         L1. |   .0407295   .1592797     0.26   0.799    -.2744092    .3558683
             |
      logdur |
         L1. |   .1335796   .0336807     3.97   0.000     .0669416    .2002175
             |
        year |
        1981 |   .0044863   .0310458     0.14   0.885    -.0569385    .0659111
        1982 |  -.0043594   .0659873    -0.07   0.947    -.1349168    .1261981
        1983 |   .0354617   .0618494     0.57   0.567    -.0869088    .1578322
        1984 |    .048362   .0646882     0.75   0.456    -.0796251    .1763492
        1985 |   .0656846   .0701335     0.94   0.351    -.0730763    .2044455
        1986 |   .0201136    .085506     0.24   0.814    -.1490621    .1892893
        1987 |   .0102574    .076541     0.13   0.894    -.1411807    .1616956
        1988 |     .01064   .0728519     0.15   0.884    -.1334994    .1547793
        1989 |   .0173963   .0871406     0.20   0.842    -.1550135    .1898062
        1990 |   -.036393   .0982779    -0.37   0.712    -.2308383    .1580523
        1991 |  -.0102032   .0939667    -0.11   0.914    -.1961187    .1757122
        1992 |   -.016053   .0971359    -0.17   0.869    -.2082388    .1761327
        1993 |   .0320051   .0957877     0.33   0.739    -.1575132    .2215234
        1994 |  -.0216288   .0980359    -0.22   0.826    -.2155953    .1723377
        1995 |  -.0032654   .0990426    -0.03   0.974    -.1992236    .1926928
        1996 |   .0122947   .1055631     0.12   0.907    -.1965644    .2211539
        1997 |  -.0006834   .1052287    -0.01   0.995    -.2088809    .2075141
        1998 |  -.0174963   .1097094    -0.16   0.874     -.234559    .1995663
        1999 |   -.070062   .1285439    -0.55   0.587    -.3243893    .1842653
        2000 |  -.0112153   .1150475    -0.10   0.922    -.2388396    .2164089
        2002 |  -.0295382   .1126489    -0.26   0.794    -.2524167    .1933404
        2003 |  -.0131432   .1173827    -0.11   0.911    -.2453877    .2191013
        2004 |  -.0552553    .107629    -0.51   0.609    -.2682018    .1576912
        2005 |  -.0068815   .1068191    -0.06   0.949    -.2182257    .2044626
        2006 |  -.0592463   .1175702    -0.50   0.615    -.2918619    .1733692
        2007 |  -.0438991   .1177602    -0.37   0.710    -.2768906    .1890924
        2008 |  -.0270993   .1177016    -0.23   0.818    -.2599747    .2057761
```

2009	-.0567418	.1225473	-0.46	0.644	-.2992046	.185721
2010	-.0316571	.1255521	-0.25	0.801	-.280065	.2167507
_cons	-.430478	.8771273	-0.49	0.624	-2.165896	1.30494
sigma_u	.74880311					
sigma_e	.3216318					
rho	.84424222	(fraction of variance due to u_i)				

```
153 est store m1

154 *identify top 10% threshold of oil production for robustness analysis
155 centile oil_new if e(sample), centile(90)
```

Variable	Obs	Percentile	Centile	Binom. Interp. [95% Conf.	Interval]
oil_new	1,719	90	7.848155	7.599663	8.069113

```
156 *Model 2 - Baseline specification, post 1980, exclude top 10% of oil_new obs
157 xtreg pers_2pl l2.oil_new l2.lgdppc l.popmad_adj l.gwf_firstldr l.logdur i.year if y
  > ear>=1980 & oil_new<7.848155, fe robust
```

Fixed-effects (within) regression — Number of obs = 1,548
Group variable: gwf_caseid — Number of groups = 124

R-sq:
within = 0.1053
between = 0.0259
overall = 0.0600

Obs per group:
min = 1
avg = 12.5
max = 30

F(34,123) = 1.99
corr(u_i, Xb) = -0.0927 — Prob > F = 0.0034

(Std. Err. adjusted for 124 clusters in gwf_caseid)

pers_2pl	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	-.0019085	.0266935	-0.07	0.943	-.0547466	.0509295
lgdppc L2.	.1434778	.122208	1.17	0.243	-.0984255	.3853811
popmad_adj L1.	-.0011174	.0008785	-1.27	0.206	-.0028563	.0006216
gwf_firstldr L1.	.0160369	.1553964	0.10	0.918	-.2915609	.3236346
logdur L1.	.1504907	.0349205	4.31	0.000	.0813677	.2196137
year						
1981	.0039685	.0333936	0.12	0.906	-.0621321	.0700691
1982	-.0074844	.0724598	-0.10	0.918	-.1509141	.1359453
1983	.0325435	.067387	0.48	0.630	-.1008449	.1659319
1984	.0420732	.0710934	0.59	0.555	-.0986518	.1827983
1985	.0623976	.0767137	0.81	0.418	-.0894525	.2142477
1986	.0132603	.0946893	0.14	0.889	-.1741713	.200692
1987	.0012559	.0844097	0.01	0.988	-.1658281	.1683398
1988	.0022967	.0809714	0.03	0.977	-.1579811	.1625746
1989	.0104485	.096902	0.11	0.914	-.181363	.2022601
1990	-.0489446	.1090135	-0.45	0.654	-.26473	.1668409
1991	-.0192421	.1035116	-0.19	0.853	-.224137	.1856528
1992	-.0264742	.107598	-0.25	0.806	-.2394579	.1865094
1993	.0262718	.1066627	0.25	0.806	-.1848605	.2374041
1994	-.0346468	.1100317	-0.31	0.753	-.2524478	.1831542
1995	-.0052314	.1119464	-0.05	0.963	-.2268225	.2163596
1996	.0033722	.1151266	0.03	0.977	-.2245138	.2312582

1997	-.0173117	.1158305	-0.15	0.881	-.2465912	.2119677
1998	-.0422168	.1190463	-0.35	0.723	-.2778617	.1934281
1999	-.1017593	.1405509	-0.72	0.470	-.3799713	.1764526
2000	-.0407221	.1257161	-0.32	0.747	-.2895694	.2081253
2002	-.0654442	.1272536	-0.51	0.608	-.3173349	.1864466
2003	-.0511047	.1290237	-0.40	0.693	-.3064992	.2042897
2004	-.101695	.1310288	-0.78	0.439	-.3610586	.1576685
2005	-.0722313	.1280273	-0.56	0.574	-.3256535	.1811909
2006	-.157641	.1423373	-1.11	0.270	-.439389	.1241069
2007	-.1200847	.1420761	-0.85	0.400	-.4013157	.1611463
2008	-.1116732	.143476	-0.78	0.438	-.395675	.1723287
2009	-.1160381	.1504133	-0.77	0.442	-.413772	.1816959
2010	-.0901759	.1530025	-0.59	0.557	-.393035	.2126833
_cons	-1.150629	.8335168	-1.38	0.170	-2.800525	.4992661
sigma_u	.78629739					
sigma_e	.32739172					
rho	.85224964	(fraction of variance due to u_i)				

```
158 est store m2

159 esttab m* using m1.csv, cells(b(star  fmt(%9.3f)) se(par fmt(%9.3f))) stats(N) style
  > (tab) replace label starlevels(* 0.10 ** 0.05 *** 0.01)
  (output written to m1.csv)

160
161
162 *TABLE 2A, MODELS 3 AND 4 / CLUSTER STANDARD ERRORS ON COUNTRY
163 tsset ccode year
        panel variable:  ccode (unbalanced)
         time variable:  year, 1960 to 2010, but with gaps
                 delta:  1 unit

164 *First identify top 10% of producers for Model 2 robustness
165 qui: xtreg pers_2pl l2.oil_new l2.lincome_new l.gwf_firstldr l.logdur l.popmad_adj i
  > .year if year>=1991, fe

166 centile oil_new if e(sample), centile(90)
```

Variable	Obs	Percentile	Centile	Binom. Interp. [95% Conf.	Interval]
oil_new	1,058	90	8.090247	7.885722	8.327578

```
167 *Model 3
168 xtreg pers_2pl l2.oil_new l2.lincome_new l.gwf_firstldr l.logdur l.popmad_adj i.year
  >  l2.in_pctgdp l2.tax if year>=1991, fe

Fixed-effects (within) regression               Number of obs      =       867
Group variable: ccode                           Number of groups   =        73

R-sq:                                           Obs per group:
     within  = 0.1386                                         min =         1
     between = 0.3172                                         avg =      11.9
     overall = 0.2997                                         max =        19

                                                F(25,769)          =      4.95
corr(u_i, Xb)  = -0.0857                        Prob > F           =    0.0000
```

pers_2pl	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	.061683	.0180499	3.42	0.001	.0262501	.0971158
lincome_new L2.	-.2578799	.0897255	-2.87	0.004	-.4340158	-.0817439
gwf_firstldr L1.	.2870241	.0560643	5.12	0.000	.1769669	.3970813
logdur L1.	.108329	.0164069	6.60	0.000	.0761214	.1405366
popmad_adj L1.	-.0019428	.0014731	-1.32	0.188	-.0048345	.000949
year						
1993	.0393546	.0699943	0.56	0.574	-.098048	.1767572
1994	-.0175133	.0725627	-0.24	0.809	-.1599578	.1249313
1995	-.0142747	.0740242	-0.19	0.847	-.1595882	.1310387
1996	.028173	.0739869	0.38	0.703	-.1170672	.1734132
1997	.0074187	.073427	0.10	0.920	-.1367224	.1515597
1998	-.0228868	.0720285	-0.32	0.751	-.1642826	.1185089
1999	-.0423413	.0713324	-0.59	0.553	-.1823706	.0976879
2000	.0045026	.0717967	0.06	0.950	-.1364382	.1454434
2001	.0064106	.0729296	0.09	0.930	-.1367542	.1495753
2002	-.0400516	.0711727	-0.56	0.574	-.1797673	.0996642
2003	.0098208	.0716527	0.14	0.891	-.1308372	.1504789
2004	-.0163065	.0725175	-0.22	0.822	-.1586622	.1260492
2005	.0351888	.0735859	0.48	0.633	-.1092643	.1796419
2006	-.0285164	.074658	-0.38	0.703	-.175074	.1180412
2007	.0140581	.0765243	0.18	0.854	-.1361633	.1642794
2008	.0412204	.0780889	0.53	0.598	-.1120722	.194513
2009	-.0019046	.079936	-0.02	0.981	-.1588234	.1550141
2010	.0132778	.081172	0.16	0.870	-.1460673	.1726228
in_pctgdp L2.	-.0026108	.0025421	-1.03	0.305	-.007601	.0023795
tax L2.	.005907	.0036852	1.60	0.109	-.0013273	.0131412
_cons	1.712427	.7080274	2.42	0.016	.3225315	3.102323
sigma_u	.61614922					
sigma_e	.31113289					
rho	.79682025	(fraction of variance due to u_i)				

F test that all u_i=0: F(72, 769) = 33.37 Prob > F = 0.0000

```
169 est store r3

170 *Model 4
171 xtreg pers_2pl l2.oil_new l2.lincome_new l.gwf_firstldr l.logdur l.popmad_adj i.year
  >  l2.in_pctgdp l2.tax if year>=1991 & oil_new<=8.09, fe

Fixed-effects (within) regression               Number of obs      =       763
Group variable: ccode                           Number of groups   =        71

R-sq:                                           Obs per group:
     within  = 0.1561                                         min =         1
     between = 0.2705                                         avg =      10.7
     overall = 0.2375                                         max =        19

                                                F(25,667)          =      4.94
corr(u_i, Xb)  = -0.3028                        Prob > F           =    0.0000
```

pers_2pl	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	.0573356	.0186177	3.08	0.002	.0207793	.0938919
lincome_new L2.	-.101083	.105114	-0.96	0.337	-.3074772	.1053112
gwf_firstldr L1.	.3050404	.0613812	4.97	0.000	.1845167	.425564
logdur L1.	.1255767	.01775	7.07	0.000	.0907242	.1604292
popmad_adj L1.	-.0027309	.0015353	-1.78	0.076	-.0057454	.0002837
year						
1993	.0440369	.0741328	0.59	0.553	-.101525	.1895987
1994	-.0142676	.0771105	-0.19	0.853	-.1656761	.1371409
1995	-.0199063	.0788194	-0.25	0.801	-.1746703	.1348578
1996	.0275398	.0793259	0.35	0.729	-.1282187	.1832983
1997	-.000294	.0785897	-0.00	0.997	-.1546071	.154019
1998	-.0393314	.0770723	-0.51	0.610	-.1906649	.1120021
1999	-.0617537	.0762748	-0.81	0.418	-.2115214	.088014
2000	-.0168441	.0771254	-0.22	0.827	-.1682819	.1345937
2001	-.0065035	.078598	-0.08	0.934	-.1608328	.1478258
2002	-.061484	.076425	-0.80	0.421	-.2115465	.0885785
2003	-.0025682	.0774954	-0.03	0.974	-.1547325	.1495961
2004	-.036917	.0792485	-0.47	0.641	-.1925237	.1186896
2005	-.0052561	.0811305	-0.06	0.948	-.164558	.1540458
2006	-.0733225	.0821251	-0.89	0.372	-.2345773	.0879324
2007	-.0288484	.084945	-0.34	0.734	-.1956402	.1379433
2008	-.0227674	.0872427	-0.26	0.794	-.1940709	.1485361
2009	-.0617204	.0888895	-0.69	0.488	-.2362574	.1128165
2010	-.0165331	.0897919	-0.18	0.854	-.192842	.1597758
in_pctgdp L2.	-.0052757	.0027119	-1.95	0.052	-.0106007	.0000493
tax L2.	.0037112	.0041057	0.90	0.366	-.0043505	.011773
_cons	.4872875	.7999058	0.61	0.543	-1.083349	2.057924
sigma_u	.65469016					
sigma_e	.31669075					
rho	.81037869	(fraction of variance due to u_i)				

F test that all u_i=0: F(**70, 667**) = **29.79** Prob > F = **0.0000**

```
172 est store r4

173
174 *TABLE 2A, MODELS 5 AND 6 / CLUSTER STANDARD ERRORS ON LEADER
175 tsset gwf_leaderid year
        panel variable:  gwf_leaderid (unbalanced)
         time variable:  year, 1960 to 2010
                 delta:  1 unit
```

```
176 *First identify top 10% of producers for Model 4 robustness
177 qui: xtreg pers_2pl l2.oil_new l2.lincome_new l.logdur l.popmad_adj i.year if year>=
  > 1991, fe

178 centile oil_new if e(sample), centile(90)
```

Variable	Obs	Percentile	Centile	Binom. Interp. [95% Conf.	Interval]
oil_new	**944**	**90**	**8.113034**	**7.929287**	**8.341421**

```
179 *Model 5
180 xtreg pers_2pl l2.oil_new l2.lincome_new l.logdur l.popmad_adj i.year l2.in_pctgdp l
  > 2.tax if year>=1991, fe

Fixed-effects (within) regression               Number of obs      =       773
Group variable: gwf_leaderid                    Number of groups   =       108

R-sq:                                           Obs per group:
     within  = 0.0984                                         min =         1
     between = 0.0769                                         avg =       7.2
     overall = 0.0650                                         max =        19

                                                F(24,641)          =      2.91
corr(u_i, Xb)  = -0.0957                        Prob > F           =    0.0000
```

pers_2pl	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	.023574	.0135665	1.74	0.083	-.0030662	.0502142
lincome_new L2.	.0326959	.074295	0.44	0.660	-.1131951	.1785869
logdur L1.	.0477927	.0327036	1.46	0.144	-.0164264	.1120117
popmad_adj L1.	-.0013435	.0026628	-0.50	0.614	-.0065725	.0038854
year						
1993	.0467925	.0448374	1.04	0.297	-.0412534	.1348384
1994	.0359496	.0475564	0.76	0.450	-.0574356	.1293348
1995	.0360022	.0492191	0.73	0.465	-.0606479	.1326524
1996	.0452975	.049816	0.91	0.364	-.0525248	.1431198
1997	.0247689	.0486031	0.51	0.610	-.0706717	.1202096
1998	.0177837	.0488089	0.36	0.716	-.0780609	.1136283
1999	.0280808	.0505013	0.56	0.578	-.0710873	.1272488
2000	.0422426	.0531783	0.79	0.427	-.0621821	.1466672
2001	.027868	.0555578	0.50	0.616	-.0812294	.1369653
2002	.010746	.0545001	0.20	0.844	-.0962742	.1177663
2003	.0293859	.0564244	0.52	0.603	-.0814132	.1401849
2004	.0580307	.0580403	1.00	0.318	-.0559414	.1720028
2005	.1065469	.0603428	1.77	0.078	-.0119465	.2250402
2006	.1063183	.0634648	1.68	0.094	-.0183057	.2309424
2007	.1128626	.0668404	1.69	0.092	-.01839	.2441153
2008	.1007795	.0689673	1.46	0.144	-.0346497	.2362087
2009	.1002608	.0726271	1.38	0.168	-.042355	.2428766
2010	.1187068	.0766331	1.55	0.122	-.0317754	.269189
in_pctgdp L2.	-.0027824	.0016481	-1.69	0.092	-.0060187	.000454
tax L2.	.0020281	.0024057	0.84	0.400	-.0026959	.0067522
_cons	-.3060679	.5891361	-0.52	0.604	-1.462938	.850802
sigma_u	.75751471					
sigma_e	.17608351					
rho	.94873733	(fraction of variance due to u_i)				

F test that all u_i=0: F(**107, 641**) = **92.32** Prob > F = **0.0000**

```
181 est store r5

182 *Model 6
183 xtreg pers_2pl l2.oil_new l2.lincome_new l.logdur l.popmad_adj i.year l2.in_pctgdp l
  > 2.tax if year>=1991 & oil_new<=8.11, fe
```

Fixed-effects (within) regression — Number of obs = **680**
Group variable: **gwf_leaderid** — Number of groups = **103**

R-sq:
within = **0.1125**
between = **0.0841**
overall = **0.0934**

Obs per group:
min = **1**
avg = **6.6**
max = **19**

F(**24,553**) = **2.92**
corr(u_i, Xb) = **-0.1387** Prob > F = **0.0000**

pers_2pl	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
oil_new L2.	.0269122	.0144253	1.87	0.063	-.0014229	.0552472
lincome_new L2.	-.0075333	.0858975	-0.09	0.930	-.1762585	.1611919
logdur L1.	.0240865	.0377836	0.64	0.524	-.0501304	.0983033
popmad_adj L1.	-.0018398	.0028087	-0.66	0.513	-.0073569	.0036773
year						
1993	.0583157	.0493027	1.18	0.237	-.0385278	.1551592
1994	.0509845	.0526937	0.97	0.334	-.0525198	.1544887
1995	.0514939	.0548777	0.94	0.348	-.0563003	.1592881
1996	.0644375	.0558205	1.15	0.249	-.0452087	.1740836
1997	.0435474	.0544901	0.80	0.425	-.0634854	.1505802
1998	.0383847	.0557201	0.69	0.491	-.0710642	.1478335
1999	.0550123	.058151	0.95	0.345	-.0592116	.1692362
2000	.0755436	.0619875	1.22	0.223	-.0462161	.1973033
2001	.063427	.065038	0.98	0.330	-.0643247	.1911788
2002	.0546731	.0640063	0.85	0.393	-.071052	.1803983
2003	.0805277	.067049	1.20	0.230	-.0511742	.2122297
2004	.1184242	.0700025	1.69	0.091	-.0190791	.2559275
2005	.1598473	.0729442	2.19	0.029	.0165658	.3031289
2006	.1864952	.0775132	2.41	0.016	.0342388	.3387516
2007	.1951938	.0821037	2.38	0.018	.0339206	.3564671
2008	.1662317	.0852764	1.95	0.052	-.0012737	.333737
2009	.1937496	.089797	2.16	0.031	.0173647	.3701346
2010	.2273552	.093946	2.42	0.016	.0428206	.4118898
in_pctgdp L2.	-.0029326	.0017664	-1.66	0.097	-.0064022	.000537
tax L2.	.001019	.0027885	0.37	0.715	-.0044583	.0064963
_cons	.0961251	.6620069	0.15	0.885	-1.204231	1.396481
sigma_u	.78246187					
sigma_e	.18379686					
rho	.94770924	(fraction of variance due to u_i)				

F test that all u_i=0: F(**102, 553**) = **79.63** Prob > F = **0.0000**

```
184 est store r6

185
186 esttab r* using r1.csv, cells(b(star  fmt(%9.3f)) se(par fmt(%9.3f))) stats(N) style
  > (tab) replace label starlevels(* 0.10 ** 0.05 *** 0.01)
  (output written to r1.csv)

187
188
189 *TABLE 3A / INCORORATING UNCERTAINTY IN THE LATENT DEPENDENT VARIABLE
190 /*
  > See replication code and data in R
  > R script "Fails_ReplicationCode_PSRM_Appendix_TableA3.R"
  > Data files "AppModel7.csv" and "AppModel8.csv"
  > */
191
192
193 *TABLE 4A / SUMMARY DESCRIPTIVE STATISTICS
194 tsset gwf_caseid year
        panel variable:  gwf_caseid (unbalanced)
         time variable:  year, 1960 to 2010
                 delta:  1 unit

195 *Full sample
196 qui: xtreg pers_2pl l2.oil_new l2.lgdppc l.popmad_adj l.gwf_firstldr l.logdur i.year
  >  if year>=1980, fe robust

197 sum pers_2pl l2.oil_new l2.lgdppc l.popmad_adj l.gwf_firstldr l.logdur if e(sample)
```

Variable	Obs	Mean	Std. Dev.	Min	Max
pers_2pl	1,720	.1101973	.8368975	-1.321256	1.828571
oil_new L2.	1,720	2.785269	3.213314	0	11.23257
lgdppc L2.	1,720	7.37242	1.279579	4.870888	11.65272
popmad_adj L1.	1,720	40.47099	154.2446	.588268	1331.4
gwf_firstldr L1.	1,720	.5063953	.5001045	0	1
logdur L1.	1,720	2.120559	.9447007	0	3.850147

```
198 *Post Cold War sample
199 qui: xtreg pers_2pl l2.oil_new l2.lincome_new l.popmad_adj l.gwf_firstldr l.logdur i
  > .year if year>1991, fe robust

200 sum pers_2pl l2.oil_new l2.lincome_new l.popmad_adj l.gwf_firstldr l.logdur l.in_pct
  > gdp l.tax if e(sample)
```

Variable	Obs	Mean	Std. Dev.	Min	Max
pers_2pl	1,031	.1275672	.8007357	-1.321256	1.828571
oil_new L2.	1,031	3.073782	3.259954	0	10.56534
lincome_new L2.	1,031	8.301839	1.235868	5.86071	11.64849
popmad_adj L1.	1,031	43.59653	168.5128	.925717	1331.4
gwf_firstldr L1.	1,031	.4733269	.4995304	0	1

logdur					
L1.	1,031	2.180384	.937194	0	3.850147
in_pctgdp					
L1.	1,024	3.694781	6.055618	-14.36902	50.82971
tax					
L1.	870	13.98875	8.274063	.5855501	49.97773

```
201
202
203 ****************
204 ****************
205 log close
       name:  <unnamed>
        log:  c:\data\Fails_PSRM_Log.smcl
   log type:  smcl
  closed on:  21 Feb 2019, 11:39:36
```