Statistics/Data Analysis

```
      name:  <unnamed>
       log:  C:\Users\ksueß\Documents\RGS\SoSe 19\Microeconometrics\Tutorials\4\Proble
> mSet4_logfile_KS.smcl
  log type:  smcl
 opened on:  20 May 2019, 20:23:36

1 .
2 . * ECONOMETRICS II - Problem Set 4
3 . * Karolin Süß
4 . * MAY 21, 2019
5 . use otc_regulation

6 .
7 . ********************************************************************************
8 . *a)
9 . *Proportion of Population covered by law
10. *Total population for each event date
11. drop if mi(event_date)
  (112 observations deleted)

12. drop if mi(pop_all_fitted)
  (450 observations deleted)

13.
14. sort event_date

15. bysort event_date: egen total_pop=total(pop_all_fitted)

16.
17. * convert dates into STATA-Dates
18. generate event_date_aux = date(event_date , "DMY")

19. format event_date_aux %td

20. drop event_date

21. rename event_date_aux event_date

22.
23. generate any_law_aux = date(any_law , "MDY")

24. format any_law_aux %td

25. drop any_law

26. rename any_law_aux any_law

27.
28. *Create weights for population under law
29. *reduce dates to month and year
30. gen event_date_ym=mofd(event_date)

31. format event_date_ym %tm

32.
33. gen any_law_ym=mofd(any_law)

34. format any_law_ym %tm
```

```
35.
36. *Dummy=1 if law already inact
37. gen OTC=(event_date>any_law)

38.
39. *Attention if law was implemented in respective month
40. gen attention=(event_date_ym==any_law_ym)

41.
42. *Find end of month to extract number of days of the month
43. gen dd = day(any_law)

44. gen mm = month(any_law)

45. gen yyyy = year(any_law)

46. gen mm1=mm+1 if mm<12
  (99 missing values generated)

47. replace mm1=1 if mm==12
  (99 real changes made)

48. replace yyyy=yyyy+1 if mm==12
  (99 real changes made)

49. gen end_month = mdy(mm1,1,yyyy)-1

50. format end_month %td

51. gen days_month=day(end_month)

52.
53. *Fraction of days under law
54. gen frac=(days_month-dd)/days_month

55. replace OTC=frac if attention==1
  (47 real changes made)

56.
57. *drop helping variables
58. drop dd

59. drop mm

60. drop yyyy

61. drop mm1

62. drop end_month

63. drop days_month

64. drop frac

65. drop attention

66.
67. *weighted population
68. gen weighted_population=OTC*pop_all_fitted
```

```
69. *Population under law
70. bysort event_date: egen pop_underlaw=total(weighted_population)

71. *fraction
72. bysort event_date: gen frac_underlaw=pop_underlaw/total_pop

73.
74. *labs with 9oz or greater
75. gen cap_over_9_oz=tot_labs - cap_under_2_oz-cap_2_8_oz

76.
77. *avg number of labs per event date
78. bysort event_date: egen avg_cap_under_2_oz=mean(cap_under_2_oz)

79. bysort event_date: egen avg_cap_2_8_oz=mean(cap_2_8_oz)

80. bysort event_date: egen avg_cap_over_9_oz=mean(cap_over_9_oz)

81. *plot
82. twoway scatter avg_cap_under_2_oz avg_cap_2_8_oz avg_cap_over_9_oz event_date_ym, //
  > /
  >                 msymbol(T Oh S) lwidth(medium)  mcolor(blue red green) lcolor(blue r
  > ed green) lpattern(dot) connect(1 2 3) yaxis(1) yscale(range(0) axis(1)) ytitle("Pro
  > portion of Population Covered by Laws")  ///
  >  ||  line frac_underlaw event_date_ym, yaxis(2) yscale(range(0) axis(2)) lcolor(blac
  > k) lwidth(medium) connect(direct) xtitle("Date") tlabel(2000m1(24)2008m2, format(%tm
  > CY)) ///
  >                 legend(symxsize(9) cols(2) rows(2) order(1 "Lab capacity under 2 oz"
  >  2 "Lab capacity 2-8 oz" 3 "Lab capacity 9 oz or greater" 4 "OTC law coverage")) yti
  > tle("Average number of labs seized per month", axis(2))
  (note:  named style 1 not found in class connectstyle, default attributes used)
  (note:  named style 2 not found in class connectstyle, default attributes used)
  (note:  named style 3 not found in class connectstyle, default attributes used)

83. graph export Dobkinetal_Fig2.pdf, replace
  (file Dobkinetal_Fig2.pdf written in PDF format)

84.
85. ********************************************************************************
86. *Ex.b)
87. *Center event dates around any_law
88. gen diff=event_date_ym-any_law_ym

89.
90. bysort diff: egen avg_cap_under_2_oz_diff=mean(cap_under_2_oz)

91. bysort diff: egen avg_cap_2_8_oz_diff=mean(cap_2_8_oz)

92. bysort diff: egen avg_cap_over_9_oz_diff=mean(cap_over_9_oz)

93.
94. twoway scatter avg_cap_under_2_oz_diff avg_cap_2_8_oz_diff avg_cap_over_9_oz_diff di
  > ff, ///
  >                 tlabel(-75(25)50) xline(0) msymbol(T Oh S) lwidth(medium)  mcolor(bl
  > ue red green) lcolor(blue red green) lpattern(dot) connect(1 2 3)   ///
  >                 xtitle("Month From (Until) Implementation of Law") ///
  >                 legend(symxsize(9) cols(2) rows(2) order(1 "Lab capacity under 2 oz"
  >  2 "Lab capacity 2-8 oz" 3 "Lab capacity 9 oz or greater")) ytitle("Average number o
  > f labs seized per month")
  (note:  named style 1 not found in class connectstyle, default attributes used)
  (note:  named style 2 not found in class connectstyle, default attributes used)
  (note:  named style 3 not found in class connectstyle, default attributes used)
```

```
95. graph export labs_distance_any_law.pdf, replace
  (file labs_distance_any_law.pdf written in PDF format)

96.
97. tab diff if diff>30
```

diff	Freq.	Percent	Cum.
31	23	25.84	25.84
32	21	23.60	49.44
33	10	11.24	60.67
34	7	7.87	68.54
35	6	6.74	75.28
36	5	5.62	80.90
37	3	3.37	84.27
38	3	3.37	87.64
39	2	2.25	89.89
40	2	2.25	92.13
41	1	1.12	93.26
42	1	1.12	94.38
43	1	1.12	95.51
44	1	1.12	96.63
45	1	1.12	97.75
46	1	1.12	98.88
47	1	1.12	100.00
Total	89	100.00	

```
98. tab diff if diff>24
```

diff	Freq.	Percent	Cum.
25	34	12.59	12.59
26	34	12.59	25.19
27	31	11.48	36.67
28	30	11.11	47.78
29	28	10.37	58.15
30	24	8.89	67.04
31	23	8.52	75.56
32	21	7.78	83.33
33	10	3.70	87.04
34	7	2.59	89.63
35	6	2.22	91.85
36	5	1.85	93.70
37	3	1.11	94.81
38	3	1.11	95.93
39	2	0.74	96.67
40	2	0.74	97.41
41	1	0.37	97.78
42	1	0.37	98.15
43	1	0.37	98.52
44	1	0.37	98.89
45	1	0.37	99.26
46	1	0.37	99.63
47	1	0.37	100.00
Total	270	100.00	

```
99. ********************************************************************************
100 *Ex.c)
```

```
101 encode state_ab, gen(state)

102 xtset state event_date
        panel variable:  state (unbalanced)
         time variable:  event_date, 15jan2000 to 15mar2008, but with gaps
                 delta:  1 day

103
104 eststo: xtreg cap_under_2_oz OTC i.event_date_ym, fe vce(cluster state)

Fixed-effects (within) regression               Number of obs      =       4,937
Group variable: state                           Number of groups   =          50

R-sq:                                           Obs per group:
     within  = 0.1419                                         min =          87
     between = 0.2305                                         avg =        98.7
     overall = 0.0449                                         max =          99

                                                F(49,49)           =           .
corr(u_i, Xb)  = -0.0354                        Prob > F           =           .

                                    (Std. Err. adjusted for 50 clusters in state)
```

cap_under_2~z	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
OTC	-4.02068	1.169908	-3.44	0.001	-6.371698	-1.669662
event_date_ym						
481	.5102041	.5764667	0.89	0.380	-.6482491	1.668657
482	-.5306122	.956649	-0.55	0.582	-2.45307	1.391846
483	-3.244898	1.073069	-3.02	0.004	-5.401311	-1.088485
484	-2.306122	1.089782	-2.12	0.039	-4.496121	-.1161242
485	-2.795918	1.046241	-2.67	0.010	-4.898418	-.6934191
486	-2.367347	.7790394	-3.04	0.004	-3.932885	-.8018086
487	-1.979592	.9108473	-2.17	0.035	-3.810008	-.1491756
488	-3.040816	1.251929	-2.43	0.019	-5.556661	-.5249715
489	-1.755102	1.11703	-1.57	0.123	-3.999859	.4896545
490	-2.571429	1.453895	-1.77	0.083	-5.493141	.3502837
491	-3.59141	1.594382	-2.25	0.029	-6.79544	-.3873792
492	.2367829	1.975161	0.12	0.905	-3.732452	4.206018
493	-1.083217	1.527877	-0.71	0.482	-4.1536	1.987166
494	1.416783	1.799698	0.79	0.435	-2.199846	5.033412
495	.0567829	1.478938	0.04	0.970	-2.915254	3.028819
496	-.0032171	1.655168	-0.00	0.998	-3.329403	3.322969
497	-1.723217	1.696407	-1.02	0.315	-5.132274	1.68584
498	-2.263217	1.772471	-1.28	0.208	-5.825131	1.298697
499	-.6832171	1.612212	-0.42	0.674	-3.923078	2.556643
500	-1.923217	1.563917	-1.23	0.225	-5.066026	1.219592
501	-.5832171	1.324451	-0.44	0.662	-3.244802	2.078367
502	-1.343217	1.570533	-0.86	0.397	-4.499322	1.812887
503	-2.123217	1.797373	-1.18	0.243	-5.735173	1.488739
504	1.736783	1.449012	1.20	0.236	-1.175117	4.648682
505	.3967829	1.397058	0.28	0.778	-2.410711	3.204277
506	-.3032171	1.58807	-0.19	0.849	-3.494564	2.88813
507	-.5632171	1.670371	-0.34	0.737	-3.919954	2.79352
508	-.1632171	1.594349	-0.10	0.919	-3.367181	3.040746
509	-1.523217	1.813649	-0.84	0.405	-5.167882	2.121447
510	-.6232171	1.801184	-0.35	0.731	-4.242832	2.996397
511	-.7832171	1.637363	-0.48	0.635	-4.073622	2.507188
512	-.5632171	1.69407	-0.33	0.741	-3.967579	2.841145
513	.7567829	1.878382	0.40	0.689	-3.017968	4.531534
514	-.1432171	1.824117	-0.08	0.938	-3.808918	3.522484
515	-.5032171	1.938805	-0.26	0.796	-4.399392	3.392958
516	2.116783	1.882467	1.12	0.266	-1.666176	5.899742
517	1.476783	1.732087	0.85	0.398	-2.003977	4.957543
518	1.916783	1.677448	1.14	0.259	-1.454175	5.287741
519	1.916783	2.035608	0.94	0.351	-2.173924	6.00749
520	1.736783	2.108309	0.82	0.414	-2.500023	5.973589
521	.6567829	2.119961	0.31	0.758	-3.603437	4.917003
522	.6367829	2.03277	0.31	0.755	-3.448222	4.721788
523	.1567829	1.959477	0.08	0.937	-3.780934	4.0945

524	.4767829	2.334929	0.20	0.839	-4.215432	5.168998
525	1.136783	2.096821	0.54	0.590	-3.076936	5.350502
526	.2167829	2.240301	0.10	0.923	-4.28527	4.718836
527	-.8032171	2.277212	-0.35	0.726	-5.379446	3.773012
528	2.676783	2.450532	1.09	0.280	-2.247745	7.601311
529	3.516783	2.425213	1.45	0.153	-1.356866	8.390431
530	4.776783	2.670919	1.79	0.080	-.590629	10.14419
531	3.261114	2.552716	1.28	0.207	-1.868762	8.390989
532	2.077197	2.518399	0.82	0.413	-2.983716	7.138109
533	1.057197	2.568438	0.41	0.682	-4.104273	6.218666
534	.3371965	2.482391	0.14	0.893	-4.651355	5.325748
535	.8771965	2.707404	0.32	0.747	-4.563535	6.317928
536	1.077197	2.622183	0.41	0.683	-4.192278	6.346671
537	.7771965	2.565346	0.30	0.763	-4.378059	5.932452
538	-.8025967	2.518691	-0.32	0.751	-5.864095	4.258902
539	-.9223899	2.431948	-0.38	0.706	-5.809572	3.964792
540	1.41761	2.656563	0.53	0.596	-3.920952	6.756173
541	.9180237	2.742485	0.33	0.739	-4.593206	6.429253
542	2.386558	2.614702	0.91	0.366	-2.867883	7.640998
543	1.004212	2.692376	0.37	0.711	-4.406321	6.414744
544	-1.674796	2.583981	-0.65	0.520	-6.867501	3.51791
545	-2.275577	2.576556	-0.88	0.381	-7.453361	2.902206
546	-1.580885	2.671099	-0.59	0.557	-6.94866	3.78689
547	-1.475208	2.605924	-0.57	0.574	-6.712008	3.761592
548	-3.384012	2.549631	-1.33	0.191	-8.507689	1.739664
549	-3.239832	2.693393	-1.20	0.235	-8.652409	2.172745
550	-3.192459	2.722078	-1.17	0.247	-8.662681	2.277762
551	-2.749305	2.614073	-1.05	0.298	-8.002481	2.503871
552	.6904319	2.818785	0.24	0.808	-4.974128	6.354991
553	-.8091545	2.819713	-0.29	0.775	-6.47558	4.857271
554	.5308455	2.775483	0.19	0.849	-5.046697	6.108388
555	-.1256349	2.960158	-0.04	0.966	-6.074295	5.823026
556	.4774632	2.926745	0.16	0.871	-5.404052	6.358978
557	-.4625368	2.63355	-0.18	0.861	-5.754854	4.829781
558	-1.662537	2.828061	-0.59	0.559	-7.345738	4.020664
559	-1.182537	2.82891	-0.42	0.678	-6.867444	4.50237
560	-2.342537	2.819908	-0.83	0.410	-8.009354	3.32428
561	-2.222537	2.887638	-0.77	0.445	-8.025464	3.58039
562	-1.742537	2.988063	-0.58	0.562	-7.747274	4.262201
563	-2.082537	2.872296	-0.73	0.472	-7.854631	3.689558
564	-2.042537	2.854732	-0.72	0.478	-7.779336	3.694263
565	-2.222537	2.888296	-0.77	0.445	-8.026785	3.581711
566	-1.962537	2.776062	-0.71	0.483	-7.541243	3.616169
567	-2.222537	2.856999	-0.78	0.440	-7.96389	3.518817
568	-2.262537	2.860874	-0.79	0.433	-8.011679	3.486605
569	-2.262537	2.73061	-0.83	0.411	-7.749904	3.22483
570	-2.062537	2.845228	-0.72	0.472	-7.780237	3.655163
571	-1.562537	2.886446	-0.54	0.591	-7.363067	4.237994
572	-1.942537	2.76043	-0.70	0.485	-7.489828	3.604754
573	-2.302537	2.825754	-0.81	0.419	-7.981103	3.376029
574	-2.762537	2.862067	-0.97	0.339	-8.514076	2.989003
575	-3.042537	2.782222	-1.09	0.279	-8.633621	2.548548
576	-2.182537	2.850738	-0.77	0.448	-7.911309	3.546235
577	-2.682537	2.984233	-0.90	0.373	-8.679578	3.314504
578	-3.262537	2.981676	-1.09	0.279	-9.254439	2.729365
_cons	9.700705	1.868595	5.19	0.000	5.945622	13.45579

sigma_u	10.027936	
sigma_e	7.5887659	
rho	.63585344	(fraction of variance due to u_i)

(**est1** stored)

105 eststo: xtreg cap_2_8_oz OTC i.event_date_ym, fe vce(cluster state)

Fixed-effects (within) regression — Number of obs = **4,937**
Group variable: **state** — Number of groups = **50**

R-sq:
within = **0.1944**
between = **0.1833**
overall = **0.0842**

Obs per group:
min = **87**
avg = **98.7**
max = **99**

F(47,49) = .
corr(u_i, Xb) = **-0.0377** — Prob > F = .

(Std. Err. adjusted for **50** clusters in state)

cap_2_8_oz	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
OTC	**-2.127343**	**.5116322**	**-4.16**	**0.000**	**-3.155506**	**-1.09918**
event_date_ym						
481	**-.1428571**	**.1839237**	**-0.78**	**0.441**	**-.5124657**	**.2267514**
482	**.244898**	**.2233855**	**1.10**	**0.278**	**-.2040119**	**.6938079**
483	**-.1836735**	**.2422784**	**-0.76**	**0.452**	**-.6705501**	**.3032031**
484	**-.3061224**	**.3161108**	**-0.97**	**0.338**	**-.9413709**	**.329126**
485	**-.2040816**	**.3725098**	**-0.55**	**0.586**	**-.9526681**	**.5445048**
486	**-.244898**	**.2878569**	**-0.85**	**0.399**	**-.8233681**	**.3335722**
487	**.1632653**	**.3998742**	**0.41**	**0.685**	**-.640312**	**.9668426**
488	**.244898**	**.3516086**	**0.70**	**0.489**	**-.461686**	**.9514819**
489	**.6734694**	**.4508924**	**1.49**	**0.142**	**-.2326327**	**1.579571**
490	**.3469388**	**.428364**	**0.81**	**0.422**	**-.5138909**	**1.207768**
491	**.101983**	**.3851363**	**0.26**	**0.792**	**-.6719774**	**.8759434**
492	**1.515728**	**.722846**	**2.10**	**0.041**	**.0631147**	**2.968342**
493	**.9957281**	**.4949643**	**2.01**	**0.050**	**.0010601**	**1.990396**
494	**1.575728**	**.580916**	**2.71**	**0.009**	**.4083337**	**2.743123**
495	**1.095728**	**.4555273**	**2.41**	**0.020**	**.1803117**	**2.011145**
496	**.8957281**	**.4466853**	**2.01**	**0.050**	**-.0019197**	**1.793376**
497	**.8557281**	**.5150208**	**1.66**	**0.103**	**-.1792449**	**1.890701**
498	**.8957281**	**.4447374**	**2.01**	**0.050**	**.0019948**	**1.789461**
499	**1.115728**	**.4759282**	**2.34**	**0.023**	**.1593145**	**2.072142**
500	**.9157281**	**.4111881**	**2.23**	**0.031**	**.0894148**	**1.742042**
501	**1.335728**	**.481656**	**2.77**	**0.008**	**.3678043**	**2.303652**
502	**1.935728**	**.6401565**	**3.02**	**0.004**	**.6492854**	**3.222171**
503	**1.155728**	**.585219**	**1.97**	**0.054**	**-.0203134**	**2.33177**
504	**2.495728**	**.8497197**	**2.94**	**0.005**	**.7881524**	**4.203304**
505	**2.515728**	**.9554416**	**2.63**	**0.011**	**.5956963**	**4.43576**
506	**2.495728**	**.6603647**	**3.78**	**0.000**	**1.168676**	**3.822781**
507	**2.595728**	**.6804085**	**3.81**	**0.000**	**1.228396**	**3.96306**
508	**2.335728**	**.6091078**	**3.83**	**0.000**	**1.11168**	**3.559776**
509	**1.935728**	**.6515131**	**2.97**	**0.005**	**.6264636**	**3.244993**
510	**1.915728**	**.6984799**	**2.74**	**0.008**	**.5120802**	**3.319376**
511	**2.835728**	**.7594355**	**3.73**	**0.000**	**1.309585**	**4.361871**
512	**2.295728**	**.6759574**	**3.40**	**0.001**	**.937341**	**3.654115**
513	**2.655728**	**.7490411**	**3.55**	**0.001**	**1.150474**	**4.160983**
514	**2.195728**	**.6613276**	**3.32**	**0.002**	**.8667405**	**3.524716**
515	**2.195728**	**.7124721**	**3.08**	**0.003**	**.7639619**	**3.627494**
516	**4.015728**	**1.278018**	**3.14**	**0.003**	**1.447455**	**6.584001**
517	**3.195728**	**.88503**	**3.61**	**0.001**	**1.417194**	**4.974262**
518	**3.695728**	**1.098148**	**3.37**	**0.001**	**1.488917**	**5.90254**
519	**3.675728**	**1.066686**	**3.45**	**0.001**	**1.532143**	**5.819314**
520	**2.975728**	**.8329646**	**3.57**	**0.001**	**1.301823**	**4.649633**
521	**2.355728**	**.7624213**	**3.09**	**0.003**	**.8235852**	**3.887871**
522	**2.495728**	**.7764601**	**3.21**	**0.002**	**.9353732**	**4.056083**
523	**2.135728**	**.761342**	**2.81**	**0.007**	**.6057541**	**3.665702**
524	**2.655728**	**.7945666**	**3.34**	**0.002**	**1.058987**	**4.252469**
525	**3.075728**	**.8281311**	**3.71**	**0.001**	**1.411536**	**4.73992**
526	**2.135728**	**.636008**	**3.36**	**0.002**	**.8576222**	**3.413834**
527	**2.235728**	**.7523047**	**2.97**	**0.005**	**.7239151**	**3.747541**
528	**3.275728**	**.9868903**	**3.32**	**0.002**	**1.292498**	**5.258958**
529	**3.095728**	**.9149483**	**3.38**	**0.001**	**1.257071**	**4.934386**
530	**3.595728**	**1.054026**	**3.41**	**0.001**	**1.477583**	**5.713873**
531	**2.869766**	**.8822628**	**3.25**	**0.002**	**1.096792**	**4.642739**

532	2.138275	.7480893	2.86	0.006	.6349332	3.641617
533	1.558275	.6724373	2.32	0.025	.2069617	2.909588
534	1.458275	.625399	2.33	0.024	.2014886	2.715061
535	2.118275	.8494936	2.49	0.016	.4111537	3.825396
536	1.798275	.7117586	2.53	0.015	.3679426	3.228607
537	1.798275	.8908445	2.02	0.049	.008056	3.588494
538	1.379548	.7054839	1.96	0.056	-.0381746	2.797271
539	1.560822	.6356614	2.46	0.018	.2834125	2.838231
540	2.120822	.703662	3.01	0.004	.7067601	3.534884
541	1.763369	.8043428	2.19	0.033	.1469813	3.379756
542	1.698466	.6035749	2.81	0.007	.4855369	2.911395
543	.9712989	.5298539	1.83	0.073	-.0934823	2.03608
544	.8647341	.4776958	1.81	0.076	-.0952315	1.8247
545	.2701405	.5663208	0.48	0.635	-.8679238	1.408205
546	.9729405	.523214	1.86	0.069	-.0784973	2.024378
547	.5923462	.47113	1.26	0.215	-.354425	1.539117
548	.5911798	.5191836	1.14	0.260	-.4521587	1.634518
549	.8203759	.6107639	1.34	0.185	-.4070001	2.047752
550	.7195146	.5491597	1.31	0.196	-.3840631	1.823092
551	.7940935	.5723659	1.39	0.172	-.3561188	1.944306
552	1.499774	.6023389	2.49	0.016	.289329	2.71022
553	1.262321	.5713537	2.21	0.032	.114143	2.4105
554	1.302321	.5777262	2.25	0.029	.1413371	2.463305
555	1.641538	.6818021	2.41	0.020	.2714052	3.01167
556	1.703071	.7123221	2.39	0.021	.2716062	3.134536
557	1.663071	.6743056	2.47	0.017	.3080033	3.018139
558	1.523071	.7290333	2.09	0.042	.0580238	2.988118
559	1.523071	.6615482	2.30	0.026	.1936402	2.852502
560	1.423071	.669364	2.13	0.039	.0779337	2.768208
561	1.283071	.6824164	1.88	0.066	-.0882961	2.654438
562	1.343071	.6728586	2.00	0.051	-.0090889	2.695231
563	1.443071	.6626498	2.18	0.034	.1114263	2.774716
564	1.503071	.6990446	2.15	0.037	.0982883	2.907854
565	1.603071	.7724071	2.08	0.043	.0508608	3.155281
566	1.443071	.7105588	2.03	0.048	.0151497	2.870992
567	1.663071	.7266905	2.29	0.026	.2027319	3.12341
568	1.783071	.7170801	2.49	0.016	.3420446	3.224097
569	1.603071	.7013428	2.29	0.027	.1936699	3.012472
570	1.703071	.7319601	2.33	0.024	.2321422	3.174
571	1.783071	.7881975	2.26	0.028	.1991289	3.367013
572	1.703071	.7284963	2.34	0.024	.2391028	3.167039
573	1.603071	.7422319	2.16	0.036	.1115001	3.094642
574	1.763071	.6992512	2.52	0.015	.3578732	3.168269
575	1.783071	.7435427	2.40	0.020	.288866	3.277276
576	1.483071	.7053041	2.10	0.041	.0657095	2.900433
577	1.383071	.6785633	2.04	0.047	.019447	2.746695
578	1.523071	.6927735	2.20	0.033	.1308906	2.915251
_cons	1.209578	.4651755	2.60	0.012	.2747731	2.144383
sigma_u	3.1805054					
sigma_e	2.9002519					
rho	.54599088	(fraction of variance due to u_i)				

(**est2** stored)

106 eststo: xtreg cap_over_9_oz OTC i.event_date_ym, fe vce(cluster state)

Fixed-effects (within) regression — Number of obs = **4,937**
Group variable: **state** — Number of groups = **50**

R-sq:
within = **0.0747**
between = **0.0156**
overall = **0.0367**

Obs per group:
min = **87**
avg = **98.7**
max = **99**

F(45,49) = .
corr(u_i, Xb) = **-0.0033** — Prob > F = .

(Std. Err. adjusted for **50** clusters in state)

cap_over_9_oz	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
OTC	**-.2735857**	**.313638**	**-0.87**	**0.387**	**-.9038649**	**.3566935**
event_date_ym						
481	**-.0612245**	**.1569737**	**-0.39**	**0.698**	**-.376675**	**.254226**
482	**.3673469**	**.2197906**	**1.67**	**0.101**	**-.0743388**	**.8090327**
483	**1.27e-14**	**.1501731**	**0.00**	**1.000**	**-.3017841**	**.3017841**
484	**-.122449**	**.1431732**	**-0.86**	**0.397**	**-.4101662**	**.1652683**
485	**.244898**	**.2030449**	**1.21**	**0.234**	**-.1631361**	**.652932**
486	**.4693878**	**.3372175**	**1.39**	**0.170**	**-.2082762**	**1.147052**
487	**.2857143**	**.1815504**	**1.57**	**0.122**	**-.0791249**	**.6505535**
488	**.5510204**	**.3422715**	**1.61**	**0.114**	**-.1367999**	**1.238841**
489	**.4693878**	**.2394489**	**1.96**	**0.056**	**-.0118028**	**.9505783**
490	**.4285714**	**.1997489**	**2.15**	**0.037**	**.027161**	**.8299818**
491	**.099829**	**.1610484**	**0.62**	**0.538**	**-.2238099**	**.423468**
492	**.9227738**	**.4984498**	**1.85**	**0.070**	**-.0788986**	**1.924446**
493	**.9027738**	**.3316402**	**2.72**	**0.009**	**.2363179**	**1.56923**
494	**1.542774**	**.7349609**	**2.10**	**0.041**	**.0658146**	**3.019733**
495	**.8827738**	**.524378**	**1.68**	**0.099**	**-.1710032**	**1.936551**
496	**.8627738**	**.3547863**	**2.43**	**0.019**	**.1498039**	**1.575744**
497	**1.162774**	**.5639803**	**2.06**	**0.045**	**.0294129**	**2.296135**
498	**.5627738**	**.2742309**	**2.05**	**0.046**	**.0116862**	**1.113861**
499	**1.262774**	**.5243973**	**2.41**	**0.020**	**.2089579**	**2.31659**
500	**.6027738**	**.2259162**	**2.67**	**0.010**	**.1487782**	**1.056769**
501	**1.202774**	**.3648805**	**3.30**	**0.002**	**.469519**	**1.936029**
502	**1.002774**	**.3829218**	**2.62**	**0.012**	**.2332636**	**1.772284**
503	**.7627738**	**.3633104**	**2.10**	**0.041**	**.0326742**	**1.492873**
504	**.8227738**	**.2754291**	**2.99**	**0.004**	**.2692782**	**1.376269**
505	**1.142774**	**.5624942**	**2.03**	**0.048**	**.0123994**	**2.273148**
506	**1.102774**	**.455682**	**2.42**	**0.019**	**.1870464**	**2.018501**
507	**.8827738**	**.3606229**	**2.45**	**0.018**	**.158075**	**1.607473**
508	**.7427738**	**.3337348**	**2.23**	**0.031**	**.0721085**	**1.413439**
509	**.8027738**	**.324185**	**2.48**	**0.017**	**.1512995**	**1.454248**
510	**.4827738**	**.2524282**	**1.91**	**0.062**	**-.0244996**	**.9900472**
511	**.5427738**	**.2533873**	**2.14**	**0.037**	**.0335729**	**1.051975**
512	**.5227738**	**.1864776**	**2.80**	**0.007**	**.1480331**	**.8975145**
513	**.6227738**	**.2958124**	**2.11**	**0.040**	**.0283166**	**1.217231**
514	**.4827738**	**.225002**	**2.15**	**0.037**	**.0306154**	**.9349322**
515	**.4027738**	**.2187165**	**1.84**	**0.072**	**-.0367535**	**.842301**
516	**.9427738**	**.2852495**	**3.31**	**0.002**	**.3695434**	**1.516004**
517	**.9827738**	**.4273178**	**2.30**	**0.026**	**.1240466**	**1.841501**
518	**.9627738**	**.3755761**	**2.56**	**0.013**	**.2080253**	**1.717522**
519	**.6227738**	**.2571231**	**2.42**	**0.019**	**.1060655**	**1.139482**
520	**.4427738**	**.2654572**	**1.67**	**0.102**	**-.0906825**	**.9762301**
521	**.0827738**	**.2116948**	**0.39**	**0.697**	**-.3426429**	**.5081904**
522	**.3827738**	**.2660235**	**1.44**	**0.157**	**-.1518205**	**.917368**
523	**.3627738**	**.2334572**	**1.55**	**0.127**	**-.106376**	**.8319236**
524	**.4227738**	**.2259283**	**1.87**	**0.067**	**-.0312462**	**.8767938**
525	**.3827738**	**.1744812**	**2.19**	**0.033**	**.0321407**	**.7334069**
526	**.3627738**	**.2170829**	**1.67**	**0.101**	**-.0734707**	**.7990183**
527	**.2027738**	**.1795014**	**1.13**	**0.264**	**-.1579478**	**.5634953**
528	**.3227738**	**.2715633**	**1.19**	**0.240**	**-.2229531**	**.8685006**
529	**.3627738**	**.2528196**	**1.43**	**0.158**	**-.1452863**	**.8708338**
530	**.8227738**	**.3460304**	**2.38**	**0.021**	**.1273997**	**1.518148**
531	**.4871511**	**.313705**	**1.55**	**0.127**	**-.1432627**	**1.117565**
532	**.9082455**	**.5157469**	**1.76**	**0.084**	**-.1281867**	**1.944678**
533	**.8482455**	**.3839749**	**2.21**	**0.032**	**.076619**	**1.619872**
534	**.7682455**	**.3626686**	**2.12**	**0.039**	**.0394357**	**1.497055**
535	**.9482455**	**.3310344**	**2.86**	**0.006**	**.2830069**	**1.613484**
536	**.5282455**	**.2570811**	**2.05**	**0.045**	**.0116217**	**1.044869**
537	**.3682455**	**.2802084**	**1.31**	**0.195**	**-.1948544**	**.9313454**
538	**.0709813**	**.2658949**	**0.27**	**0.791**	**-.4633545**	**.6053172**
539	**.1737172**	**.2497995**	**0.70**	**0.490**	**-.3282738**	**.6757081**
540	**-.0662828**	**.3555882**	**-0.19**	**0.853**	**-.780864**	**.6482984**
541	**.0791889**	**.2379514**	**0.33**	**0.741**	**-.3989924**	**.5573702**
542	**.1611305**	**.2762086**	**0.58**	**0.562**	**-.3939316**	**.7161925**
543	**-.1695029**	**.341268**	**-0.50**	**0.622**	**-.8553066**	**.5163009**
544	**-.2226309**	**.3273165**	**-0.68**	**0.500**	**-.880398**	**.4351363**

545	-.1090751	.300047	-0.36	0.718	-.7120422	.4938919
546	-.109557	.3077538	-0.36	0.723	-.7280114	.5088973
547	-.3142009	.3530365	-0.89	0.378	-1.023654	.3952524
548	-.3266346	.3904732	-0.84	0.407	-1.11132	.4580506
549	-.1900195	.4470778	-0.43	0.673	-1.088456	.7084171
550	-.3972698	.448459	-0.89	0.380	-1.298482	.5039424
551	-.5302507	.4890269	-1.08	0.284	-1.512987	.4524856
552	-.2966597	.4754958	-0.62	0.536	-1.252204	.6588849
553	-.2911879	.4508621	-0.65	0.521	-1.197229	.6148534
554	-.1911879	.3991021	-0.48	0.634	-.9932137	.6108378
555	.0730135	.4348099	0.17	0.867	-.8007696	.9467966
556	-.0836405	.4737972	-0.18	0.861	-1.035772	.8684905
557	-.2236405	.5642099	-0.40	0.694	-1.357463	.9101816
558	-.3236405	.5758975	-0.56	0.577	-1.48095	.8336688
559	-.1636405	.5880752	-0.28	0.782	-1.345422	1.018141
560	-.2636405	.6007847	-0.44	0.663	-1.470962	.9436815
561	-.3036405	.5767979	-0.53	0.601	-1.462759	.8554782
562	-.2236405	.5230765	-0.43	0.671	-1.274802	.8275211
563	-.3436405	.5940287	-0.58	0.566	-1.537386	.8501048
564	-.3836405	.5941263	-0.65	0.521	-1.577582	.810301
565	-.3036405	.5577901	-0.54	0.589	-1.424562	.8172806
566	-.2836405	.599321	-0.47	0.638	-1.488021	.9207401
567	-.3036405	.5561047	-0.55	0.588	-1.421175	.8138937
568	-.3036405	.5976081	-0.51	0.614	-1.504579	.8972978
569	-.2036405	.5641875	-0.36	0.720	-1.337418	.9301367
570	-.1636405	.5247359	-0.31	0.756	-1.218137	.8908559
571	-.1836405	.5417974	-0.34	0.736	-1.272423	.9051422
572	-.2636405	.5938917	-0.44	0.659	-1.457111	.9298296
573	-.3236405	.5972239	-0.54	0.590	-1.523807	.8765258
574	-.1836405	.5883511	-0.31	0.756	-1.365976	.9986953
575	-.3436405	.5747285	-0.60	0.553	-1.498601	.8113197
576	-.2436405	.5821535	-0.42	0.677	-1.413522	.9262408
577	-.1836405	.5467077	-0.34	0.738	-1.282291	.9150098
578	-.2236405	.5403135	-0.41	0.681	-1.309441	.8621602
_cons	.6994414	.1180264	5.93	0.000	.4622585	.9366244
sigma_u	2.1596313					
sigma_e	2.1032948					
rho	.51321315	(fraction of variance due to u_i)				

(**est3** stored)

107 eststo: xtreg tot_labs OTC i.event_date_ym, fe vce(cluster state)

Fixed-effects (within) regression — Number of obs = **4,937**
Group variable: **state** — Number of groups = **50**

R-sq:
within = **0.1856**
between = **0.2007**
overall = **0.0577**

Obs per group:
min = **87**
avg = **98.7**
max = **99**

F(49,49) = .
corr(u_i, Xb) = **-0.0337** — Prob > F = .

(Std. Err. adjusted for **50** clusters in state)

tot_labs	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
OTC	-6.421609	1.817241	-3.53	0.001	-10.07349	-2.769727
event_date_ym						
481	.3061224	.6214196	0.49	0.624	-.9426671	1.554912
482	.0816327	1.077629	0.08	0.940	-2.083944	2.247209
483	-3.428571	1.158753	-2.96	0.005	-5.757173	-1.09997
484	-2.734694	1.253596	-2.18	0.034	-5.253889	-.2154984
485	-2.755102	1.21164	-2.27	0.027	-5.189984	-.3202199
486	-2.142857	.8556115	-2.50	0.016	-3.862273	-.4234414
487	-1.530612	1.065188	-1.44	0.157	-3.671187	.609963
488	-2.244898	1.351728	-1.66	0.103	-4.961297	.4715011

489	-.6122449	1.281664	-0.48	0.635	-3.187846	1.963356
490	-1.795918	1.293173	-1.39	0.171	-4.394647	.8028101
491	-3.389598	1.67795	-2.02	0.049	-6.761565	-.0176301
492	2.675285	1.693678	1.58	0.121	-.7282877	6.078857
493	.8152848	1.258771	0.65	0.520	-1.714311	3.34488
494	4.535285	1.230575	3.69	0.001	2.062352	7.008217
495	2.035285	1.1385	1.79	0.080	-.2526172	4.323187
496	1.755285	1.439248	1.22	0.228	-1.136993	4.647563
497	.2952848	1.096467	0.27	0.789	-1.908149	2.498718
498	-.8047152	1.431302	-0.56	0.577	-3.681023	2.071593
499	1.695285	1.332691	1.27	0.209	-.9828583	4.373428
500	-.4047152	1.544919	-0.26	0.794	-3.509346	2.699916
501	1.955285	1.008988	1.94	0.058	-.0723516	3.982921
502	1.595285	1.408856	1.13	0.263	-1.235918	4.426487
503	-.2047152	1.793665	-0.11	0.910	-3.80922	3.39979
504	5.055285	1.820353	2.78	0.008	1.397149	8.71342
505	4.055285	1.548432	2.62	0.012	.9435949	7.166975
506	3.295285	1.420685	2.32	0.025	.4403119	6.150258
507	2.915285	1.524256	1.91	0.062	-.1478216	5.978391
508	2.915285	1.440608	2.02	0.048	.0202738	5.810296
509	1.215285	1.769258	0.69	0.495	-2.340172	4.770741
510	1.775285	1.970691	0.90	0.372	-2.184967	5.735537
511	2.595285	1.818937	1.43	0.160	-1.060006	6.250576
512	2.255285	1.885118	1.20	0.237	-1.533002	6.043571
513	4.035285	2.033045	1.98	0.053	-.0502727	8.120842
514	2.535285	1.967468	1.29	0.204	-1.41849	6.48906
515	2.095285	2.066951	1.01	0.316	-2.058409	6.248979
516	7.075285	2.253811	3.14	0.003	2.546082	11.60449
517	5.655285	1.957144	2.89	0.006	1.722257	9.588313
518	6.575285	2.292049	2.87	0.006	1.96924	11.18133
519	6.215285	2.445931	2.54	0.014	1.300003	11.13057
520	5.155285	2.495224	2.07	0.044	.1409447	10.16962
521	3.095285	2.559648	1.21	0.232	-2.04852	8.23909
522	3.515285	2.312328	1.52	0.135	-1.131511	8.162081
523	2.655285	2.211563	1.20	0.236	-1.789017	7.099586
524	3.555285	2.546929	1.40	0.169	-1.56296	8.67353
525	4.595285	2.572719	1.79	0.080	-.574787	9.765357
526	2.715285	2.668913	1.02	0.314	-2.648097	8.078666
527	1.635285	2.768205	0.59	0.557	-3.927631	7.198201
528	6.275285	3.224564	1.95	0.057	-.2047184	12.75529
529	6.975285	3.031728	2.30	0.026	.8827987	13.06777
530	9.195285	3.354514	2.74	0.009	2.454137	15.93643
531	6.618031	3.047569	2.17	0.035	.4937105	12.74235
532	5.123717	3.049589	1.68	0.099	-1.004662	11.2521
533	3.463717	2.938449	1.18	0.244	-2.441317	9.368751
534	2.563717	2.751551	0.93	0.356	-2.965731	8.093165
535	3.943717	3.21978	1.22	0.226	-2.526672	10.41411
536	3.403717	2.994428	1.14	0.261	-2.613811	9.421245
537	2.943717	3.122767	0.94	0.350	-3.331718	9.219152
538	.6479331	3.070176	0.21	0.834	-5.521818	6.817684
539	.8121492	2.910733	0.28	0.781	-5.037188	6.661486
540	3.472149	3.220901	1.08	0.286	-3.000494	9.944792
541	2.760581	3.366259	0.82	0.416	-4.004169	9.525332
542	4.246154	3.07089	1.38	0.173	-1.92503	10.41734
543	1.806008	3.199374	0.56	0.575	-4.623375	8.235391
544	-1.032692	3.055064	-0.34	0.737	-7.172074	5.106689
545	-2.114512	3.038969	-0.70	0.490	-8.221549	3.992525
546	-.7175014	3.210981	-0.22	0.824	-7.170208	5.735206
547	-1.197063	3.223255	-0.37	0.712	-7.674435	5.28031
548	-3.119467	3.226704	-0.97	0.338	-9.603772	3.364837
549	-2.609475	3.364998	-0.78	0.442	-9.371693	4.152742
550	-2.870215	3.405461	-0.84	0.403	-9.713744	3.973315
551	-2.485462	3.339731	-0.74	0.460	-9.196902	4.225978
552	1.893547	3.419159	0.55	0.582	-4.977511	8.764604
553	.1619788	3.450976	0.05	0.963	-6.773017	7.096975
554	1.641979	3.368407	0.49	0.628	-5.127089	8.411047
555	1.588916	3.699581	0.43	0.669	-5.84567	9.023503
556	2.096894	3.71687	0.56	0.575	-5.372437	9.566224
557	.9768937	3.532344	0.28	0.783	-6.121617	8.075404
558	-.4631063	3.744938	-0.12	0.902	-7.988841	7.062628
559	.1768937	3.747022	0.05	0.963	-7.353029	7.706816
560	-1.183106	3.762603	-0.31	0.755	-8.744341	6.378128

561	-1.243106	3.819169	-0.33	0.746	-8.918013	6.431801
562	-.6231063	3.882512	-0.16	0.873	-8.425306	7.179094
563	-.9831063	3.854453	-0.26	0.800	-8.728919	6.762706
564	-.9231063	3.81431	-0.24	0.810	-8.588249	6.742036
565	-.9231063	3.828149	-0.24	0.810	-8.616059	6.769846
566	-.8031063	3.755721	-0.21	0.832	-8.350509	6.744297
567	-.8631063	3.809254	-0.23	0.822	-8.518089	6.791876
568	-.7831063	3.81338	-0.21	0.838	-8.446381	6.880169
569	-.8631063	3.642936	-0.24	0.814	-8.18386	6.457647
570	-.5231063	3.756772	-0.14	0.890	-8.072623	7.02641
571	.0368937	3.834449	0.01	0.992	-7.66872	7.742508
572	-.5031063	3.707241	-0.14	0.893	-7.953087	6.946874
573	-1.023106	3.768944	-0.27	0.787	-8.597083	6.55087
574	-1.183106	3.742002	-0.32	0.753	-8.702941	6.336729
575	-1.603106	3.686747	-0.43	0.666	-9.011902	5.805689
576	-.9431063	3.799295	-0.25	0.805	-8.578075	6.691863
577	-1.483106	3.928105	-0.38	0.707	-9.376928	6.410715
578	-1.963106	3.888556	-0.50	0.616	-9.777452	5.85124
_cons	11.60972	2.035424	5.70	0.000	7.519387	15.70006
sigma_u	14.463172					
sigma_e	10.211623					
rho	.66733537	(fraction of variance due to u_i)				

(**est4** stored)

```
108 esttab using labs_OTC.tex, replace b(4) se(4) ar2(4) ///
  >   title(Effect of law on number of discovered labs)
  (output written to labs_OTC.tex)

109 eststo clear

110
111
112 ********************************************************************************
113 *Ex.f)
114
115 gen event_time_plus100=diff+100 //not possible to create dummy for negative values t
  > herefore add 100 to each difference to law inacted

116 label define l_event_time_plus100  88 "-12" 89 "-11" 90 "-10" 91 "-9" 92 "-8" 93 "-7
  > " 94 "-6" 95 "-5" 96 "-4" 97 "-3" 98 "-2" 99 "-1" 100 "0" 101 "1" 102 "2" 103 "3" 10
  > 4 "4" 105 "5" 106 "6" 107 "7" 108 "8" 109 "9" 110 "10" 111 "11" 112 "12" 113 "13" 11
  > 4 "14" 115 "15" 116 "16" 117 "17" 118 "18" 119 "19" 120 "20" 121 "21" 122 "22" 123 "
  > 23" 124 "24"

117 label value event_time_plus100 l_event_time_plus100

118
119 xtreg cap_under_2_oz i.event_date_ym ib88.event_time_plus100 event_time_plus100 if e
  > vent_time_plus100>87 & event_time_plus100<125, fe vce(cluster state) //dummy 88 is t
  > he event-time dummy one year before the law was enacted. Footnote 24 states that all
  >  effects one year before the law was enacted are set to zero
  note: 124.event_time_plus100 omitted because of collinearity
  note: event_time_plus100 omitted because of collinearity

  Fixed-effects (within) regression               Number of obs      =      1,834
  Group variable: state                           Number of groups   =         50

  R-sq:                                           Obs per group:
       within  = 0.4390                                         min =         36
       between = 0.2197                                         avg =       36.7
       overall = 0.2303                                         max =         37

                                                  F(49,49)           =          .
  corr(u_i, Xb)  = 0.1235                         Prob > F           =          .
```

(Std. Err. adjusted for **50** clusters in state)

cap_under_2_oz	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
event_date_ym						
520	-16.29738	.7490794	-21.76	0.000	-17.80271	-14.79205
521	-12.24708	1.169427	-10.47	0.000	-14.59713	-9.897027
522	-11.88599	.858468	-13.85	0.000	-13.61115	-10.16083
523	-14.32522	.8611779	-16.63	0.000	-16.05583	-12.59462
524	-24.56435	1.229587	-19.98	0.000	-27.0353	-22.0934
525	-16.8168	1.141612	-14.73	0.000	-19.11095	-14.52264
526	-24.51622	2.637459	-9.30	0.000	-29.8164	-19.21605
527	-23.93502	6.131589	-3.90	0.000	-36.25691	-11.61313
528	-16.55307	5.334642	-3.10	0.003	-27.27344	-5.832705
529	-15.69543	5.089142	-3.08	0.003	-25.92245	-5.46842
530	-10.86518	6.090213	-1.78	0.081	-23.10392	1.373561
531	-21.73976	2.790306	-7.79	0.000	-27.34709	-16.13243
532	-19.8805	1.899232	-10.47	0.000	-23.69715	-16.06385
533	-24.58569	2.09065	-11.76	0.000	-28.78701	-20.38438
534	-27.69041	1.455809	-19.02	0.000	-30.61597	-24.76485
535	-28.12038	1.946463	-14.45	0.000	-32.03194	-24.20881
536	-28.45703	1.592127	-17.87	0.000	-31.65653	-25.25753
537	-30.6763	1.236887	-24.80	0.000	-33.16191	-28.19068
538	-32.77511	1.249566	-26.23	0.000	-35.2862	-30.26401
539	-34.91759	1.510599	-23.12	0.000	-37.95325	-31.88192
540	-31.02229	1.45699	-21.29	0.000	-33.95022	-28.09436
541	-32.17488	1.477416	-21.78	0.000	-35.14386	-29.2059
542	-31.0754	1.662858	-18.69	0.000	-34.41704	-27.73376
543	-32.70083	1.488216	-21.97	0.000	-35.69151	-29.71015
544	-36.15309	1.789818	-20.20	0.000	-39.74987	-32.55632
545	-37.74636	1.91689	-19.69	0.000	-41.59849	-33.89422
546	-37.56398	1.647753	-22.80	0.000	-40.87526	-34.25269
547	-37.29572	1.856541	-20.09	0.000	-41.02658	-33.56486
548	-40.1964	2.221462	-18.09	0.000	-44.66059	-35.7322
549	-39.75238	1.972289	-20.16	0.000	-43.71585	-35.78892
550	-40.3059	2.107844	-19.12	0.000	-44.54177	-36.07003
551	-40.00572	1.980757	-20.20	0.000	-43.9862	-36.02524
552	-35.93534	1.730572	-20.77	0.000	-39.41306	-32.45763
553	-38.05407	1.816013	-20.95	0.000	-41.70348	-34.40465
554	-36.62831	1.699615	-21.55	0.000	-40.04381	-33.2128
555	-37.88865	1.824435	-20.77	0.000	-41.55499	-34.22231
556	-37.37112	1.900617	-19.66	0.000	-41.19055	-33.55169
557	-38.18245	1.78866	-21.35	0.000	-41.7769	-34.58801
558	-38.89093	1.86236	-20.88	0.000	-42.63348	-35.14838
559	-38.40147	1.63265	-23.52	0.000	-41.68241	-35.12054
560	-39.66616	1.730973	-22.92	0.000	-43.14468	-36.18764
561	-38.76998	1.781706	-21.76	0.000	-42.35045	-35.1895
562	-38.54309	1.55232	-24.83	0.000	-41.6626	-35.42359
563	-39.03776	1.809681	-21.57	0.000	-42.67445	-35.40107
564	-38.25732	1.709303	-22.38	0.000	-41.69229	-34.82235
565	-39.00403	1.818851	-21.44	0.000	-42.65915	-35.34891
566	-38.52749	1.618287	-23.81	0.000	-41.77956	-35.27542
567	-38.22525	1.556497	-24.56	0.000	-41.35315	-35.09735
568	-37.67933	1.508874	-24.97	0.000	-40.71153	-34.64714
569	-37.41675	1.586931	-23.58	0.000	-40.60581	-34.22769
570	-36.7821	1.358054	-27.08	0.000	-39.51122	-34.05299
571	-36.84619	1.373816	-26.82	0.000	-39.60698	-34.08541
572	-36.50233	1.46729	-24.88	0.000	-39.45096	-33.5537
573	-36.38668	1.378985	-26.39	0.000	-39.15785	-33.61551
574	-37.31162	1.643337	-22.70	0.000	-40.61403	-34.00921
575	-37.24834	1.647841	-22.60	0.000	-40.5598	-33.93688
576	-36.45978	1.573477	-23.17	0.000	-39.6218	-33.29775
577	-35.88088	1.611404	-22.27	0.000	-39.11911	-32.64264
578	-35.88924	1.483565	-24.19	0.000	-38.87058	-32.90791
event_time_plus100						
-11	1.297376	.7490794	1.73	0.090	-.207955	2.802708
-10	3.247078	1.169427	2.78	0.008	.8970269	5.59713
-9	2.88599	.858468	3.36	0.002	1.160834	4.611146
-8	2.325225	.8611779	2.70	0.009	.5946229	4.055826
-7	5.564349	1.229587	4.53	0.000	3.093402	8.035297

-6	4.816796	1.141612	4.22	0.000	2.522641	7.110951
-5	5.93276	1.172309	5.06	0.000	3.576916	8.288604
-4	6.472973	1.399271	4.63	0.000	3.661032	9.284915
-3	4.514278	.9981357	4.52	0.000	2.50845	6.520107
-2	6.00508	1.369078	4.39	0.000	3.253815	8.756346
-1	5.568437	1.382245	4.03	0.000	2.790711	8.346163
0	5.69003	1.079154	5.27	0.000	3.521388	7.858672
1	4.334244	1.157615	3.74	0.000	2.007929	6.660559
2	3.959749	1.076755	3.68	0.001	1.795928	6.123569
3	3.197554	1.08346	2.95	0.005	1.020259	5.374848
4	3.390276	.7874305	4.31	0.000	1.807875	4.972676
5	3.785899	.9070115	4.17	0.000	1.963191	5.608607
6	2.848721	1.272052	2.24	0.030	.2924365	5.405005
7	3.897827	.8980411	4.34	0.000	2.093146	5.702508
8	4.400925	1.470097	2.99	0.004	1.446653	7.355196
9	3.043868	1.118166	2.72	0.009	.7968285	5.290908
10	4.174278	.969593	4.31	0.000	2.225808	6.122748
11	3.802813	.8240612	4.61	0.000	2.1468	5.458825
12	3.27865	.843949	3.88	0.000	1.582671	4.974629
13	2.623984	.8071579	3.25	0.002	1.001939	4.246028
14	2.954773	.7896857	3.74	0.000	1.36784	4.541706
15	1.791759	.5021948	3.57	0.001	.7825609	2.800958
16	1.734249	.4777004	3.63	0.001	.7742744	2.694224
17	1.693495	.6132326	2.76	0.008	.4611582	2.925832
18	1.308527	.4950182	2.64	0.011	.3137507	2.303303
19	2.140844	.7914404	2.70	0.009	.5503846	3.731303
20	1.910476	.6643303	2.88	0.006	.5754538	3.245497
21	1.483928	.7212131	2.06	0.045	.0345962	2.93326
22	.9791207	.6244364	1.57	0.123	-.2757312	2.233972
23	.9874839	.5809307	1.70	0.096	-.17994	2.154908
24	0	(omitted)				
event_time_plus100	0	(omitted)				
_cons	39.85698	.984524	40.48	0.000	37.87851	41.83546
sigma_u	8.9095815					
sigma_e	4.6261401					
rho	.78764848	(fraction of variance due to u_i)				

```
120 coefplot, vertical keep(*.event_time_plus100) yline(0)

121 graph export coefplot_cap_under_2_oz.pdf, replace
  (file coefplot_cap_under_2_oz.pdf written in PDF format)

122
123 xtreg cap_2_8_oz i.event_date_ym ib88.event_time_plus100 event_time_plus100  if even
  > t_time_plus100>87 & event_time_plus100<125, fe vce(cluster state)
  note: 124.event_time_plus100 omitted because of collinearity
  note: event_time_plus100 omitted because of collinearity

  Fixed-effects (within) regression               Number of obs     =      1,834
  Group variable: state                           Number of groups  =         50

  R-sq:                                           Obs per group:
       within  = 0.3718                                         min =         36
       between = 0.1936                                         avg =       36.7
       overall = 0.2742                                         max =         37

                                                  F(45,49)          =          .
  corr(u_i, Xb)  = 0.0670                         Prob > F          =          .
```

(Std. Err. adjusted for **50** clusters in state)

cap_2_8_oz	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
event_date_ym						
520	3.666805	.5529883	6.63	0.000	2.555533	4.778077
521	4.892217	.5780828	8.46	0.000	3.730516	6.053918
522	3.429377	.4248987	8.07	0.000	2.575512	4.283243
523	1.318897	.689562	1.91	0.062	-.06683	2.704623
524	-.6128096	.5414562	-1.13	0.263	-1.700907	.4752873
525	2.451153	.580101	4.23	0.000	1.285396	3.616909
526	-2.846454	.6697964	-4.25	0.000	-4.19246	-1.500447
527	-1.864811	1.237545	-1.51	0.138	-4.35175	.6221279
528	-.825308	1.834077	-0.45	0.655	-4.511024	2.860408
529	-1.017708	2.490286	-0.41	0.685	-6.022125	3.986709
530	2.167334	3.279786	0.66	0.512	-4.423642	8.758311
531	-1.899954	1.412533	-1.35	0.185	-4.738546	.9386373
532	-2.537367	1.872156	-1.36	0.182	-6.299606	1.224873
533	-5.086615	.9183268	-5.54	0.000	-6.932062	-3.241168
534	-5.782804	.5729878	-10.09	0.000	-6.934266	-4.631342
535	-4.216415	.9662394	-4.36	0.000	-6.158146	-2.274684
536	-5.336362	.7771758	-6.87	0.000	-6.898156	-3.774569
537	-5.819165	.7970475	-7.30	0.000	-7.420892	-4.217438
538	-6.519148	.6700899	-9.73	0.000	-7.865744	-5.172552
539	-6.507483	.6762012	-9.62	0.000	-7.866361	-5.148606
540	-5.655723	.7587328	-7.45	0.000	-7.180453	-4.130992
541	-6.378632	.7897499	-8.08	0.000	-7.965694	-4.79157
542	-6.740274	.8763332	-7.69	0.000	-8.501332	-4.979217
543	-7.904633	.8126609	-9.73	0.000	-9.537736	-6.271529
544	-7.912133	.9010371	-8.78	0.000	-9.722835	-6.101431
545	-8.806858	.8773274	-10.04	0.000	-10.56991	-7.043803
546	-8.384276	.8987212	-9.33	0.000	-10.19032	-6.578228
547	-9.193047	.9823358	-9.36	0.000	-11.16712	-7.218969
548	-9.137366	.9747709	-9.37	0.000	-11.09624	-7.178491
549	-8.975307	.9337012	-9.61	0.000	-10.85165	-7.098964
550	-9.421855	1.03263	-9.12	0.000	-11.497	-7.346707
551	-9.29351	.9939022	-9.35	0.000	-11.29083	-7.296189
552	-8.665272	.9613256	-9.01	0.000	-10.59713	-6.733415
553	-8.879093	.9527593	-9.32	0.000	-10.79373	-6.964451
554	-8.717398	.9142768	-9.53	0.000	-10.55471	-6.880089
555	-8.814182	.8911633	-9.89	0.000	-10.60504	-7.023323
556	-8.864076	.8736669	-10.15	0.000	-10.61978	-7.108377
557	-8.824201	.8849329	-9.97	0.000	-10.60254	-7.045861
558	-8.841583	.8146256	-10.85	0.000	-10.47863	-7.204532
559	-8.865688	.8576679	-10.34	0.000	-10.58924	-7.14214
560	-9.02758	.8474474	-10.65	0.000	-10.73059	-7.324571
561	-9.018199	.7904448	-11.41	0.000	-10.60666	-7.42974
562	-9.045089	.8269072	-10.94	0.000	-10.70682	-7.383357
563	-8.931433	.8354897	-10.69	0.000	-10.61041	-7.252453
564	-8.724144	.7547369	-11.56	0.000	-10.24084	-7.207444
565	-8.586077	.7320747	-11.73	0.000	-10.05724	-7.114918
566	-8.910564	.7662426	-11.63	0.000	-10.45039	-7.370742
567	-8.51522	.6470368	-13.16	0.000	-9.815489	-7.214951
568	-8.382327	.6990076	-11.99	0.000	-9.787035	-6.977618
569	-8.577691	.6621874	-12.95	0.000	-9.908407	-7.246976
570	-8.407705	.6323465	-13.30	0.000	-9.678453	-7.136957
571	-8.445961	.6828483	-12.37	0.000	-9.818196	-7.073726
572	-8.434289	.684956	-12.31	0.000	-9.810759	-7.057818
573	-8.687422	.651988	-13.32	0.000	-9.997641	-7.377203
574	-8.326221	.6579773	-12.65	0.000	-9.648476	-7.003966
575	-8.379349	.8505125	-9.85	0.000	-10.08852	-6.67018
576	-9.03427	.6941995	-13.01	0.000	-10.42932	-7.639224
577	-8.608464	.7101006	-12.12	0.000	-10.03546	-7.181464
578	-8.228307	.6422284	-12.81	0.000	-9.518913	-6.937701
event_time_plus100						
-11	-.6668049	.5529883	-1.21	0.234	-1.778077	.4444667
-10	.1077833	.5780828	0.19	0.853	-1.053918	1.269484
-9	-.4293774	.4248987	-1.01	0.317	-1.283243	.4244884
-8	.6811032	.689562	0.99	0.328	-.7046235	2.06683
-7	.6128096	.5414562	1.13	0.263	-.4752873	1.700907

-6	.5488473	.580101	0.95	0.349	-.6169094	1.714604
-5	1.432581	.7255766	1.97	0.054	-.0255196	2.890682
-4	1.136101	.7951118	1.43	0.159	-.4617358	2.733938
-3	1.173318	.6697313	1.75	0.086	-.172557	2.519194
-2	.9544836	.6371719	1.50	0.141	-.3259613	2.234928
-1	.7347545	.5683736	1.29	0.202	-.4074351	1.876944
0	.8585273	.5426906	1.58	0.120	-.2320503	1.949105
1	.524046	.499283	1.05	0.299	-.4793006	1.527393
2	.420114	.4827132	0.87	0.388	-.5499344	1.390163
3	.2380267	.4755477	0.50	0.619	-.7176223	1.193676
4	.3263394	.4593463	0.71	0.481	-.5967515	1.24943
5	.4569664	.4630563	0.99	0.329	-.4735801	1.387513
6	.3481712	.4248133	0.82	0.416	-.505523	1.201865
7	.5137322	.4633155	1.11	0.273	-.4173352	1.4448
8	.4001202	.3995972	1.00	0.322	-.4029004	1.203141
9	-.0059162	.3458292	-0.02	0.986	-.700886	.6890535
10	-.066543	.3480055	-0.19	0.849	-.7658862	.6328002
11	.147665	.3276163	0.45	0.654	-.5107045	.8060346
12	-.0714774	.2999702	-0.24	0.813	-.6742901	.5313353
13	.0297373	.3443236	0.09	0.932	-.6622069	.7216815
14	.0124445	.2755382	0.05	0.964	-.5412703	.5661593
15	-.1378406	.269796	-0.51	0.612	-.6800158	.4043347
16	.0154709	.2501632	0.06	0.951	-.4872508	.5181926
17	-.0994601	.2475372	-0.40	0.690	-.5969048	.3979845
18	-.0082183	.2587305	-0.03	0.975	-.5281567	.51172
19	-.2989584	.2162282	-1.38	0.173	-.7334853	.1355685
20	-.012756	.3563812	-0.04	0.972	-.7289308	.7034188
21	.107066	.1753824	0.61	0.544	-.2453782	.4595101
22	.1117389	.2754643	0.41	0.687	-.4418274	.6653052
23	-.2684184	.222043	-1.21	0.233	-.7146306	.1777937
24	0	(omitted)				
event_time_plus100	0	(omitted)				
_cons	9.3594	.4794968	19.52	0.000	8.395815	10.32298
sigma_u	2.1553866					
sigma_e	1.9422766					
rho	.5518674	(fraction of variance due to u_i)				

```
124 coefplot, vertical keep(*.event_time_plus100) yline(0)

125 graph export coefplot_cap_2_8_oz.pdf, replace
  (file coefplot_cap_2_8_oz.pdf written in PDF format)

126
127 xtreg cap_over_9_oz i.event_date_ym ib88.event_time_plus100 event_time_plus100  if e
  > vent_time_plus100>87 & event_time_plus100<125, fe vce(cluster state)
  note: 124.event_time_plus100 omitted because of collinearity
  note: event_time_plus100 omitted because of collinearity

  Fixed-effects (within) regression               Number of obs     =      1,834
  Group variable: state                           Number of groups  =         50

  R-sq:                                           Obs per group:
       within  = 0.2245                                         min =         36
       between = 0.2403                                         avg =       36.7
       overall = 0.2125                                         max =         37

                                                  F(35,49)          =          .
  corr(u_i, Xb)  = 0.0935                         Prob > F          =          .
```

(Std. Err. adjusted for **50** clusters in state)

cap_over_9_oz	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
event_date_ym						
520	-1.07968	.2435738	-4.43	0.000	-1.56916	-.5901998
521	-4.122516	.3309689	-12.46	0.000	-4.787623	-3.457409
522	-6.240885	.3620681	-17.24	0.000	-6.968488	-5.513281
523	-4.355965	.4233873	-10.29	0.000	-5.206794	-3.505136
524	-3.833289	.6272242	-6.11	0.000	-5.093743	-2.572835
525	-2.939571	.7444138	-3.95	0.000	-4.435526	-1.443615
526	-4.411842	.7657487	-5.76	0.000	-5.950672	-2.873012
527	-3.439874	1.596797	-2.15	0.036	-6.648758	-.2309895
528	-2.615993	.7753784	-3.37	0.001	-4.174174	-1.057812
529	-3.559921	.4037677	-8.82	0.000	-4.371322	-2.74852
530	-2.855232	.5276494	-5.41	0.000	-3.915584	-1.794881
531	-3.398464	.9889454	-3.44	0.001	-5.385824	-1.411104
532	-2.578091	1.712041	-1.51	0.139	-6.018566	.862384
533	-3.27522	.6547939	-5.00	0.000	-4.591078	-1.959362
534	-3.849769	.5591709	-6.88	0.000	-4.973465	-2.726073
535	-3.654697	.4750508	-7.69	0.000	-4.609347	-2.700046
536	-4.325507	.3576163	-12.10	0.000	-5.044163	-3.60685
537	-4.677671	.4370632	-10.70	0.000	-5.555982	-3.79936
538	-5.111194	.4266985	-11.98	0.000	-5.968677	-4.253712
539	-5.163216	.6244437	-8.27	0.000	-6.418083	-3.90835
540	-5.502581	.7153702	-7.69	0.000	-6.940171	-4.064991
541	-5.274042	.7265887	-7.26	0.000	-6.734176	-3.813907
542	-5.14314	.7481271	-6.87	0.000	-6.646557	-3.639722
543	-5.531665	.4804013	-11.51	0.000	-6.497068	-4.566263
544	-5.544515	.5157301	-10.75	0.000	-6.580914	-4.508117
545	-5.469483	.6077735	-9.00	0.000	-6.69085	-4.248117
546	-5.581909	.6968257	-8.01	0.000	-6.982233	-4.181585
547	-5.770622	.6530972	-8.84	0.000	-7.08307	-4.458174
548	-5.967589	.7194176	-8.30	0.000	-7.413313	-4.521865
549	-5.916538	.7029528	-8.42	0.000	-7.329174	-4.503901
550	-6.023841	.7133869	-8.44	0.000	-7.457446	-4.590237
551	-6.143756	.7410745	-8.29	0.000	-7.633001	-4.654511
552	-5.929895	.6865522	-8.64	0.000	-7.309573	-4.550216
553	-5.781787	.6633981	-8.72	0.000	-7.114936	-4.448639
554	-5.661776	.6380903	-8.87	0.000	-6.944066	-4.379485
555	-5.471776	.6417107	-8.53	0.000	-6.761342	-4.18221
556	-5.546124	.6011934	-9.23	0.000	-6.754267	-4.337981
557	-5.79875	.5763418	-10.06	0.000	-6.956953	-4.640548
558	-5.854327	.5521908	-10.60	0.000	-6.963996	-4.744658
559	-5.666819	.5410155	-10.47	0.000	-6.754031	-4.579608
560	-5.78014	.5408983	-10.69	0.000	-6.867116	-4.693165
561	-5.666877	.5127839	-11.05	0.000	-6.697355	-4.6364
562	-5.563103	.4920906	-11.31	0.000	-6.551996	-4.57421
563	-5.629379	.3834185	-14.68	0.000	-6.399888	-4.858871
564	-5.624311	.3795428	-14.82	0.000	-6.38703	-4.861591
565	-5.507292	.3621274	-15.21	0.000	-6.235015	-4.77957
566	-5.551345	.3794867	-14.63	0.000	-6.313952	-4.788738
567	-5.507469	.3256542	-16.91	0.000	-6.161896	-4.853042
568	-5.496356	.3449867	-15.93	0.000	-6.189633	-4.803079
569	-5.368401	.3101905	-17.31	0.000	-5.991753	-4.74505
570	-5.296344	.3172636	-16.69	0.000	-5.93391	-4.658779
571	-5.371029	.3113748	-17.25	0.000	-5.996761	-4.745298
572	-5.533071	.3361593	-16.46	0.000	-6.208608	-4.857533
573	-5.445351	.3257132	-16.72	0.000	-6.099896	-4.790806
574	-5.411721	.3124145	-17.32	0.000	-6.039541	-4.7839
575	-5.472211	.2873933	-19.04	0.000	-6.04975	-4.894673
576	-5.471274	.2788603	-19.62	0.000	-6.031665	-4.910883
577	-5.344783	.2812925	-19.00	0.000	-5.910061	-4.779504
578	-5.222266	.2550023	-20.48	0.000	-5.734713	-4.70982
event_time_plus100						
-11	.0796797	.2435738	0.33	0.745	-.4098002	.5691595
-10	.1225157	.3309689	0.37	0.713	-.5425911	.7876225
-9	.2408845	.3620681	0.67	0.509	-.4867186	.9684876
-8	.3559651	.4233873	0.84	0.405	-.4948636	1.206794
-7	.8332889	.6272242	1.33	0.190	-.4271653	2.093743

-6	.9395707	.7444138	1.26	0.213	-.5563848	2.435526
-5	.7614075	.6720939	1.13	0.263	-.5892157	2.112031
-4	.7377907	.7571238	0.97	0.335	-.7837065	2.259288
-3	.9143703	.6121827	1.49	0.142	-.3158568	2.144597
-2	.5481056	.5996983	0.91	0.365	-.6570333	1.753244
-1	.4952944	.5970335	0.83	0.411	-.7044893	1.695078
0	.6051026	.590609	1.02	0.311	-.5817707	1.791976
1	.3785906	.481723	0.79	0.436	-.5894681	1.346649
2	.6044403	.481713	1.25	0.216	-.3635982	1.572479
3	.7503808	.4925969	1.52	0.134	-.2395298	1.740291
4	.6814014	.5011815	1.36	0.180	-.3257605	1.688563
5	.6685636	.543774	1.23	0.225	-.4241911	1.761318
6	.3788538	.5102563	0.74	0.461	-.6465447	1.404252
7	.3109905	.4483546	0.69	0.491	-.5900118	1.211993
8	.3259208	.3429091	0.95	0.347	-.3631809	1.015023
9	.3028388	.3493244	0.87	0.390	-.3991549	1.004833
10	.2702044	.3239318	0.83	0.408	-.3807608	.9211696
11	.4558838	.3671252	1.24	0.220	-.2818819	1.19365
12	.2303293	.2776157	0.83	0.411	-.3275604	.788219
13	.1569829	.2589501	0.61	0.547	-.3633968	.6773627
14	.2294737	.2391956	0.96	0.342	-.2512079	.7101552
15	.1415864	.2194206	0.65	0.522	-.2993557	.5825286
16	.0928658	.2022509	0.46	0.648	-.3135725	.4993042
17	.2420926	.1758744	1.38	0.175	-.1113402	.5955253
18	.1440166	.1691814	0.85	0.399	-.1959661	.4839993
19	.063292	.1587412	0.40	0.692	-.2557103	.3822943
20	.024289	.1112237	0.22	0.828	-.1992234	.2478015
21	.0790931	.0890764	0.89	0.379	-.0999126	.2580988
22	.1112302	.1093414	1.02	0.314	-.1084996	.3309599
23	-.0737863	.0903522	-0.82	0.418	-.2553558	.1077832
24	0	(omitted)				
event_time_plus100	0	(omitted)				
_cons	5.55491	.1780389	31.20	0.000	5.197127	5.912692
sigma_u	.74007049					
sigma_e	1.0403448					
rho	.33601045	(fraction of variance due to u_i)				

```
128 coefplot, vertical keep(*.event_time_plus100) yline(0)

129 graph export coefplot_cap_over_9_oz.pdf, replace
  (file coefplot_cap_over_9_oz.pdf written in PDF format)

130
131
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