```
name: <unnamed>
log: D:\replication_science.log
 log type: text
 opened on: 27 Mar 2018, 00:38:01
. clear;
  * Replicate Figure 1 *
  * The data are in an Excel spreadsheet that is provided in dataverse;
  * Replicate Figure 2 *
  *First, create sales figures *;
. use bckcheck-state-public.dta;
 keep if year>=2008;
(5,400 observations deleted)
. collapse (sum) total, by(year month);
. gen sandyhookp1 = year == 2012 & month == 12;
. gen sandyhookp2 = year == 2013 & month == 1;
. gen sandyhookp3 = year == 2013 & month == 2;
. gen sandyhookp4 = year == 2013 & month == 3;
. gen sandyhookp5 = year == 2013 & month == 4;
. tab month, gen(monthdv);
      month |
                   Freq.
                              Percent
                                              Cum.
                        9
                                 8.33
                                             8.33
          1 I
                        9
                                 8.33
                                             16.67
          3
                        9
                                 8.33
                                             25.00
          4
                        9
                                 8.33
                                             33.33
                        9
                                 8.33
          5
                                             41.67
                        9
          6
                                 8.33
                                             50.00
          7
                                 8.33
                                             58.33
                        9
          8
                                 8.33
                                             66.67
          9
                        9
                                 8.33
                                             75.00
         10
                                 8.33
                                             83.33
         11
                        9
                                 8.33
                                             91.67
         12
                                 8.33
                                            100.00
      Total |
                      108
                               100.00
. forvalues y = 2009/2015 {;
 2. gen yrdv`y' = year == `y';
3. };
. *Estimate de-seasonalized and de-trended gun sales;
. regress total sandyhookp1-sandyhookp5 monthdv2-monthdv12 yrdv2009-yrdv2015;
                                   df
                      SS
                                             MS
                                                      Number of obs
                                                                               108
      Source |
                                                      F(23, 84)
Prob > F
                                                                              4.80
                                   23 6.4521e+11
84 1.3446e+11
      Model |
                1.4840e+13
                                                                       =
                                                                            0.0000
   Residual | 1.1294e+13
                                                      R-squared
                                                                            0.5678
```

Total | 2.6134e+13 107 2.4425e+11

Adj R-squared

Root MSE

0.4495

3.7e+05

total	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
sandyhookp1	656455.4	406365.1	1.62	0.110	-151646.1	1464557
sandyhookp2	972215.6	412568	2.36	0.021	151779	1792652
sandyhookp3	620474.2	412568	1.50	0.136	-199962.4	1440911
sandyhookp4	447190	412568	1.08	0.282	-373246.7	1267627
sandyhookp5	215327.2	412568	0.52	0.603	-605109.4	1035764
monthdv2	167224.4	183341.8	0.91	0.364	-197371	531819.7
monthdv3	238848.6	183341.8	1.30	0.196	-125746.7	603444
monthdv4	-23871.63	183341.8	-0.13	0.897	-388467	340723.7
monthdv5	-182383.7	178831.5	-1.02	0.311	-538009.7	173242.3
monthdv6	-210737.6	178831.5	-1.18	0.242	-566363.6	144888.4
monthdv7	-179785.2	178831.5	-1.01	0.318	-535411.2	175840.9
monthdv8	-107817.2	178831.5	-0.60	0.548	-463443.2	247808.9
monthdv9	-100990.5	178831.5	-0.56	0.574	-456616.5	254635.5
monthdv10	95779.29	178831.5	0.54	0.594	-259846.7	451405.3
monthdv11	281976.3	178831.5	1.58	0.119	-73649.72	637602.3
monthdv12	600038.4	184616	3.25	0.002	232909.1	967167.6
yrdv2009	-505881	129642.2	-3.90	0.000	-763688.8	-248073.1
yrdv2010	-477914	129642.2	-3.69	0.000	-735721.9	-220106.2
yrdv2011	-310154.6	129642.2	-2.39	0.019	-567962.5	-52346.8
yrdv2012	-104570.5	133992	-0.78	0.437	-371028.4	161887.4
yrdv2013	-112778.4	152033.7	-0.74	0.460	-415114.2	189557.4
yrdv2014	66281.12	129642.2	0.51	0.611	-191526.7	324089
yrdv2015	246777.8	129642.2	1.90	0.060	-11030.04	504585.6
_cons	1622218	145006.2	11.19	0.000	1333857	1910579

- . predict resid, resid;
- . format total %10.0f;
- . \*These residuals are the points for the times series in Figure 2.;
  . \*The points for the Sandy Hook time period are the residuals + the coefficients on s > andyhookp1> sandyhookp5.;
  . list year month total resid, clean;

year 1. 2008 2. 2008 3. 2008 4. 2008 5. 2008 6. 2008 7. 2008 8. 2008 10. 2008 11. 2008 11. 2008 12. 2009 14. 2009 15. 2009 16. 2009 17. 2009 18. 2009 20. 2009 21. 2009 22. 2009	month 1 2 3 4 5 6 7 8 9 10 11 12 2 3 4 5 6 7 8 9 9 10 7 8 9 9	total 940265 1019190 1039060 938134 884577 817800 888974 954908 970748 1181383 1521580 1211967 1256515 1341386 1221082 1018465 963165 962684 1069981 1086755 1225664	resid -681952.8 -770252.1 -822006.4 -660212.1 -555257.1 -593680.2 -553458.6 -559492.6 -550479.3 -536614.1 -700676.1 95630.19 -27046.19 -13799.44 128616.8 84511.89 57565.79 26132.34 61461.34 71408.67 13547.89
19. 2009	7	962684	26132.34
21. 2009	9	1086755	71408.67
23. 2009	11	1216451	-181862.1
24. 2009 25. 2010	12 1	1400208 1111556	-316167.2 -32747.73
26. 2010 27. 2010	2	1236788 1290685	-74740.11 -92467.36
28. 2010	4	1225887	105454.9
29. 2010 30. 2010	5 6	1009046 997406	47125.98 63839.87
31. 2010 32. 2010	7 8	1061881 1081394	97362.42 44907.42

```
105.
      2016
              9
                   1981896
                             460668.7
106.
      2016
              10
                   2324740
                             606742.9
107.
      2016
                             648389.9
               11
                   2552584
108.
      2016
               12
                   2761141
                             538884.9
. clear;
. * Next, create mortality bars *;
. use deaths-age-public.dta;
. keep if agecat=="0_14";
(108 observations deleted)
 keep if month==12 | month<=4;
(63 observations deleted)
. gen mortrate = (numdeaths/pop_byage)*100000;
. * We use five-month December-April windows, with the year for each window defined as
> the later
> of the two years;
 replace year = year+1 if month==12;
(9 real changes made)
. tab year;
     year | Freq. Percent Cum.
              4 8.89 8.89
     2007 I
      2008
                    5
                           11.11
                                      20.00
                      11.11
11.11
11.11
11.11
                                  31.11
      2009
                   5
      2010
                   5
                                    42.22
                                    53.33
64.44
                    5
      2011
                  5
      2012
                       11.11
11.11
11.11
11.11
                                    75.56
86.67
97.78
      2013
                    5
      2014
                           11.11 97.78
2.22 100.00
      2015
                    5
                   1
      2016 İ
     Total |
            45
                      100.00
drop if year<2008 | year>2015;
(5 observations deleted)
. gen trend = year-2007;
. gen trend2 = trend^2;
. *We exclude the Sandy Hook window from our estimation of the trend;
. regress mortrate trend trend2 if year ~= 2013;
               SS
                           df MS
                                            Number of obs =
                                                               1.11
                                            F(2, 32)
Prob > F
                                                             0.3406
  =
                                            R-squared
                                                          = 0.0651
                                            Adj R-squared = 0.0067
-----
     Total | .000557087
                            34 .000016385
                                            Root MSE
                                                                .00403
```

mortrate | Coef. Std. Err. t P>|t| [95% Conf. Interval]

```
. predict resid, resid;
. sort year;
. collapse (sum) numdeaths mortrate resid, by(year);
. list, clean;
               numdea~s
                         mortrate
                          .0295897
  1.
       2008
                    18
                                       .0039821
  2.
       2009
                     15
                          .0245888
                                      -.0079301
                          .0408603
                                      .0035152
  3.
       2010
                     25
  4.
                     27
                          .0441302
                                       .0040438
       2011
  5.
       2012
                     20
                          .0327136
                                      -.0080289
  6.
                     37
                          .0605583
                                       .0212448
       2013
       2014
                     28
                          .0458412
                                       .0100417
                          .0245767
  8.
       2015
                     15
                                      -.0056237
. clear;
  * Replicate Figure 3 *;
. use bckcheck-state-public.dta;
. sort year stfips;
 merge year stfips using population-state-public.dta;
(note: you are using old merge syntax; see [D] merge for new syntax) variables year stfips do not uniquely identify observations in the master data
. tab _merge;
     _merge |
                 Freq.
                              Percent
                    5,400 49.96 49.96
          2
                                 0.08
                                             50.04
                       9
                                           100.00
          3 İ
                   5,400
                                49.96
      Total |
                   10,809
                              100.00
 keep if year>=2008;
(5,401 observations deleted)
. *Calculate sales per 100,000;
  gen totalpc = (total/pop)*100000;
(608 missing values generated)
. gen sandyhook = (year == 2012 \& month == 12) | (year == 2013 \& month <= 4);
. tab month, gen(monthdv);
      month |
                    Freq.
                              Percent
                                  8.33
          1 |
                      450
                                              8.33
          2
                      450
                                  8.33
                                             16.67
          3
                      450
                                              25.00
                                  8.33
           4
                      450
                                  8.33
                                              33.33
          5
                      450
                                  8.33
                                             41.67
           6
                      450
                                  8.33
                                             50.00
                                              58.33
          7
                      450
                                  8.33
          8
                      450
                                  8.33
                                             66.67
          9
                      450
                                  8.33
                                             75.00
                      450
                                             83.33
         10
                                 8.33
         11
                      450
                                  8.33
                                             91.67
```

12 İ

Total |

450

5,400

8.33

100.00

100.00

```
. forvalues y = 2009/2015 {;
2. gen yrdv`y' = year == `y';
. foreach x in AK AL AR AZ CA CO CT DE FL GA HI IA ID IL IN KS LA MA MD ME MI MN MO MS
> MT ND NE N
> H NJ NM NV NY OH OK OR PA RI SC SD TN TX VA VT WA WI WV WY {;
  2. *Estimate de-seasonalized and de-trended gun sales;
 *Multiply coefficients from these regressions by 5 to obtain values reported in Figu
> re 3;
. di "`x'";
  3. regress totalpc sandyhook monthdv2-monthdv12 yrdv2009-yrdv2015 if stname=="`x'";
  4. };
ΑK
                                                     Number of obs =
      Source |
                    SS
                                 df
                                            MS
                                                                               96
                                                     F(19, 76)
Prob > F
                                                                     =
                                                                            19.67
   =
                                                                         0.0000
                                                     R-squared
                                                                     = 0.8310
                                                                          0.7888
                                                    Adj R-squared =
Total | 4740280.81 95 49897.6927
                                                    Root MSE
                                                                           102.66
   totalpc | Coef. Std. Err. t P>|t| [95% Conf. Interval]
-----
  ------
                                                0.000
0.000
0.000
0.000
    monthdv8 |
                 271.4883 51.82678
                                         5.24
                                                           168.2664
                                                                         374.7103
                 200.3843 51.82678
471.7293 51.82678
    monthdv9
                                          3.87
                                                            97.16231
                                                                         303.6063
                                                           368.5073
                                         3.0.
9.10
   monthdv10 |

    0.000
    368.5073

    0.000
    185.8398

    0.000
    389.7116

    0.576
    -107.0377

                                                                         574.9513
   monthdv11
                289.0618
                          51.82678
                                         5.58
                                                                       392.2837
   monthdv12 |
yrdv2009 |
                 491.9458 51.33082
-23.56385 41.91144
                                          9.58
                                                                          594.18
                                       -0.56
                                                                       59.91001
               -23.56385
                                                 0.619 -62.52974
    vrdv2010 i
                                         0.50
                 20.94412
                            41.91144
                                                                         104.418
                                                0.149
0.000
0.001
                                                         -22.33409
                61.13977
                            41.91144
                                          1.46
    yrdv2011 |
                                                                         144.6136
    yrdv2012
                 187.2648
                            42.18184
                                          4.44
                                                            103.2524
                                                                         271.2772
    ýrdv2013 |
                 159.053 46.04768
242.421 41.91144
                                          3.45
                                                                         250.7649
                                                             67.3411
                                       5.78 0.000
    ýrdv2014 |
                                                            158.9471
                                                                         325.8948
    yrdv2015 |
     rdv2015 | 217.9686 41.91144
_cons | 519.629 45.86212
                                           5.20
                                                 0.000
                                                            134.4947
                                                                         301,4424
                                       11.33
                                                 0.000
                                                            428.2867
                                                                         610.9713
ΑI
      Source | SS df
                                                    Number of obs =
                                                                               96
-----
                                                                     =
                                                     F(19, 76)
                                                                           42.63
   Prob' > F'
                                                                           0.0000
                                                    R-squared
                                                                     =
                                                                          0.9142
                                                     Adj R-squared = 0.8928
Total | 12583607
                            95 132459.021
                                                    Root MSE
                                                                           119.17
   totalpc | Coef. Std. Err. t P>|t| [95% Conf. Interval]

    sandyhook
    122.5291
    66.42426
    1.84
    0.069
    -9.766276
    254.8245

    monthdv2
    129.2712
    59.58547
    2.17
    0.033
    10.59646
    247.946

    monthdv3
    29.39333
    59.58547
    0.49
    0.623
    -89.28143
    148.0681

    monthdv4
    -141.389
    59.58547
    -2.37
    0.020
    -260.0638
    -22.71426

                                                 0.013
                                                                       -33.57871
    monthdv5
                -153.4001
                             60.16119
                                       -2.55
                                                          -273.2215
                -166.7525
                                         -2.77
                                                 0.007
0.083
    monthdv6
                            60.16119
                                                           -286.5739
                                                                       -46.93112
    monthdv7
                -105.6887
                             60.16119
                                         -1.76
                                                           -225.5101
                                                                         14.1327
    monthdv8
                 5.829742
                             60.16119
                                         0.10
                                                 0.923
                                                          -113.9917
                                                                         125,6511
                                                0.608 -150.7694
0.439 -73.06063
0.000 132.99
                                         -0.51
                -30.94803
    monthdv9
                            60.16119
                                                                        88.87336
                                        0.78
   monthdv10
                 46.76076
                            60.16119
                                                                         166.5822
   monthdv11
                 252.8114 60.16119
                                          4.20
                                                                         372.6328
                                                             132.99

    4.20
    0.000
    132.99
    372.6328

    10.90
    0.000
    531.0372
    768.3867

    0.57
    0.568
    -69.02396
    124.7711

    0.18
    0.861
    -88.31922
    105.4758

   monthdv12 | 649.7119 59.58547
yrdv2009 | 27.87357 48.65133
yrdv2010 | 8.578306 48.65133
                649.7119 59.58547
                                                                         124.7711
                                                                       105.4758
```

yrdv2011   yrdv2012   yrdv2013   yrdv2014   yrdv2015   _cons	54.51656 207.3102 403.0683 539.4657 735.9967 485.8925	48.65133 48.96522 53.45273 48.65133 48.65133 53.23734	1.12 4.23 7.54 11.09 15.13 9.13	0.266 0.000 0.000 0.000 0.000 0.000	-42.38097 109.7875 296.6079 442.5682 639.0992 379.8612	151.4141 304.8329 509.5286 636.3633 832.8942 591.9239
AR						
Source	SS	df	MS		er of obs = . 76) =	
Model   Residual	2915383.23 387225.806	19 76	153441.222 5095.07639	2 Prob 9 R-sq	, 76) = > F = uared = R-squared =	0.0000 0.8828
Total	3302609.03	95	34764.305		MSE =	
totalpc	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
sandyhook   monthdv2   monthdv4   monthdv5   monthdv6   monthdv7   monthdv8   monthdv9   monthdv10   monthdv11   monthdv12   yrdv2010   yrdv2011   yrdv2012   yrdv2013   yrdv2014   yrdv2015   cons	279.0826 192.2594 78.39728 -40.76303 -76.16356 -87.85379 -57.50467 5.917252 23.49497 120.2964 244.9665 382.8794 47.62602 -10.1031 28.81193 116.2963 139.0361 102.0328 164.0563 490.5315	39.78613 35.6899 35.6899 35.6899 36.03474 36.03474 36.03474 36.03474 36.03474 36.03474 36.03474 36.03474 36.03474 35.6899 29.14068 29.14068 29.14068 29.14068 29.14068 29.14068 29.14068 31.88756	7.01 5.39 2.20 -1.14 -2.11 -2.44 -1.60 0.16 0.65 3.34 60.83 -0.35 0.99 3.97 4.34 3.50 5.63 15.38	0.000 0.000 0.031 0.257 0.038 0.017 0.115 0.870 0.516 0.001 0.000 0.106 0.730 0.326 0.000 0.000 0.000 0.000 0.000	199.8417 121.1768 7.314682 -111.8456 -147.933 -159.6232 -129.2741 -65.85215 -48.27444 48.52704 173.1971 311.7968 -10.41268 -68.1418 -29.22677 57.88316 75.26953 43.99408 106.0176 427.0219	358.3236 263.342 149.4799 30.31957 -4.394158 -16.08438 14.26473 77.68666 95.26437 192.0658 316.7359 453.962 105.6647 47.9356 86.85063 174.7095 202.8026 160.0715 222.095 554.0411
AZ						
Source	SS	df	MS		er of obs = , 76) =	
Model   Residual	835775.95 115688.967	19 76	43988.2079 1522.22329	9 Prob 5 R-sq	/>F = uared = R-squared =	0.0000 0.8784
Total	951464.917	95	10015.420		MSE =	
totalpc	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
sandyhook   monthdv2   monthdv3   monthdv4   monthdv5   monthdv7   monthdv7   monthdv10   monthdv11   monthdv11   yrdv2010   yrdv2011   yrdv2012   yrdv2013   yrdv2014   yrdv2015  cons	155.6539 52.03185 41.42481 -8.678064 -19.2371 -34.08636 -35.83353 -2.651546 -24.35314 -13.81988 28.34242 142.2947 6.005394 -8.998647 47.01556 142.0057 127.4158 107.8058 127.5602 266.4964	21.74681 19.50784 19.50784 19.50784 19.69633 19.69633 19.69633 19.69633 19.69633 19.69633 19.50784 15.92808 15.92808 15.92808 15.92808 15.92808 17.50003 15.92808 17.50003	7.16 2.67 2.12 -0.44 -0.98 -1.73 -1.82 -0.13 -1.24 -0.70 1.44 7.29 0.38 -0.56 2.95 8.86 7.28 6.77 8.01 15.29	0.000 0.009 0.037 0.658 0.332 0.088 0.073 0.893 0.220 0.485 0.154 0.000 0.707 0.574 0.004 0.000 0.000 0.000 0.000	112.3414 13.17862 2.57158 -47.53129 -58.46573 -73.31499 -75.06217 -41.88018 -63.58177 -53.04851 -10.88621 103.4415 -25.71814 -40.72218 15.29203 110.0775 92.56145 76.08227 95.83663 231.7825	198.9665 90.88508 80.27804 30.17517 19.99153 5.142274 3.395099 36.57709 14.87549 25.40875 67.57105 181.1479 37.72892 22.72488 78.73909 173.9339 162.2701 139.5293 159.2837 301.2103

CA	

0/1						
Source	SS	df	MS	Number 0 F(19, 76		= 96 = 20.13
Model   Residual	584136.985 116085.085	19 76	30744.0519 1527.43533	Prob > F R-square	= ed	= 0.0000 = 0.8342
Total	700222.07	95	7370.75863	Adj R-so Root MSE	quared E	= 0.7928 = 39.082
totalpc	Coef.	Std. Err.	t F	?> t	95% Conf	. Interval]
sandyhook   monthdv2   monthdv3   monthdv4   monthdv5   monthdv6   monthdv7   monthdv9   monthdv10   monthdv11   monthdv11   yrdv2010   yrdv2011   yrdv2011   yrdv2012   yrdv2014   yrdv2015  cons	31.23912 -2.722445 59.23288 23.93407 9.249848 -1.807371 .1754839 13.56153 1.150397 34.01344 42.09838 110.1888 .0354258 4.563086 22.53378 67.74355 108.7516 139.1108 197.2416 153.5756	21.78401 19.54121 19.54121 19.54121 19.73002 19.73002 19.73002 19.73002 19.73002 19.73002 19.73002 19.73002 19.54121 15.95533 15.95533 15.95533 15.95533 15.95533 15.95533 17.45932	-0.14	0.890 -4 0.003 -2 0.224 -3 0.641 -3 0.997 -4 0.954 -3 0.089 -5 0.036 -2 0.000 -3 0.162 -9 0.162 -9 0.000 -3 0.000	12.14749 11.64213 20.31319 14.98562 30.04589 11.10311 39.12025 -25.7342 38.14534 5.282295 2.802645 71.26915 31.74237 27.21471 9.244012 35.76073 73.83763 107.333 107.333 105.4638 118.8024	74.62573 36.19725 98.15257 62.85376 48.54558 37.48836 39.47122 52.85727 40.44613 73.30917 81.39411 149.1085 31.81322 36.34088 54.31158 99.72636 143.6655 170.8886 229.0194 188.3489
CO Source I	cc	de	MC	Number	of obo	- 06
Source	SS 	df	MS	Number 0 F(19, 70	5)	= 96 = 19.58
Model   Residual	2059757.53 420803.038	19 76	108408.291 5536.88208	Prob > F R-square	ed	= 0.0000 = 0.8304 = 0.7879
Total	2480560.56	95	26111.1638	Adj R-so Root MSE		= 74.41
totalpc	Coef.	Std. Err.	t F	?> t	95% Conf	. Interval]
sandyhook   monthdv2   monthdv3   monthdv4   monthdv5   monthdv6   monthdv7   monthdv9   monthdv10   monthdv11   monthdv12   yrdv2019   yrdv2011   yrdv2012   yrdv2013   yrdv201	244.2088 50.9079 90.0274 -3.76054 -22.62161 -53.67355 -43.88664 .7984779 -26.57749 26.76894 127.9438 241.9622 39.05838 9.974523 60.81257 158.9128 245.6397	41.47525 37.20511 37.20511 37.56459 37.56459 37.56459 37.56459 37.56459 37.56459 37.56459 37.56459 37.56459 37.56459 37.56459 37.56459 37.785 30.37785 30.37785 30.37785	1.37 2.42 -0.10 -0.60 -1.43 -1.17 0.02 -0.71 0.71 3.41 6.50 0.33 2.00 5.20 7.36	0.175 -2 0.018 0.920 -1 0.549 -9 0.157 -2 0.246 0.983 -2 0.481 -2 0.478 -4 0.001 5 0.000 5 0.202 -2 0.744 -5 0.049 0.000 5 0.000 5 0.000 5	161.6037 23.19251 15.927 77.86095 97.43798 128.4899 -118.703 74.01789 101.3939 48.04743 53.12742 167.8618 21.44435 50.52821 .3098373 98.01973 179.1659	326.814 125.0083 164.1278 70.33987 52.19476 21.14282 30.92973 75.61485 48.23888 101.5853 202.7602 316.0626 99.56111 70.47725 121.3153 219.8059 312.1134 216.9758
yrdv2014   yrdv2015   cons	156.4731 206.8481 454.2757	30.37785 33.24135	6.81	0.000	146.3454 388.0698	267.3509 520.4816

Source	SS	df	MS		of obs	= 96
Model Residual	1933615.25   502953.377	19 76	101769.223 6617.8076	F(19, Prob > R-squa	F red	= 15.38 = 0.0000 = 0.7936
Total	2436568.62	95	25648.0908	Adj R- Root M	squared SE	= 0.7420 = 81.35
totalpc	Coef.	Std. Err.	t F	P> t	[95% Conf	. Interval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv8 monthdv9 monthdv10 monthdv11 monthdv12 yrdv2009 yrdv2010 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015 _cons	141.1219 -14.30463 107.8852 -5.961899 -68.43819 -80.68227 -107.8967 -82.90213 -67.97533 -41.85352 -8.010356 66.31995 107.2852 51.70123 65.55822 172.6037 268.4503 260.2157 347.8089 391.7018	45.34333 40.67495 40.67495 40.67495 41.06796 41.06796 41.06796 41.06796 41.06796 41.06796 33.21096 33.21096 33.21096 33.42523 36.48855 33.21096 33.21096 33.21096 33.21096 33.21096 33.21096 33.21096	-0.35	0.010 0.884 0.100 0.053 0.010 0.047 0.102 0.311 0.846 0.107 0.002 0.124	50.81279 -95.31582 26.87404 -86.97309 -150.2321 -162.4762 -189.6906 -164.6961 -149.7693 -123.6474 -89.80428 -14.69124 41.13989 -14.44413 -5871415 106.0316 195.777 194.0703 281.6635 319.3214	231.4309 66.70656 188.8964 75.04929 13.35574 1.111658 -26.10272 -1.108206 13.8186 39.94041 73.78357 147.3311 173.4306 117.8466 131.7036 239.1758 341.1235 341.1235 326.3611 413.9542 464.0822
DE	i					
Source	SS	df	MS	Number F(19,	of obs	= 96 = 43.14
Model Residual	1472544.64 136537.649	19	77502.3497	Prob >	,	= 0.0000
	1 100007.040	76	1796.54801	R-squa	red	= 0.9151
Total	+			R-squa	red squared	
Total totalpc	+	76	1796.54801  16937.7084	R-squa Adj R-	red squared SE	= 0.9151 = 0.8939
	1609082.29	76 95	1796.54801 16937.7084  t  7.58 0.39 1.43 -1.05 -0.49 -1.90 -1.89 -0.57 -0.53 1.49 4.71 8.61 1.22 0.43 2.07 5.37 6.86 12.24 15.80	R-squa Adj R- Root M: 	red squared SE	= 0.9151 = 0.8939 = 42.386

Source	SS	df	MS		per of obs 9, 76)	= 96 = 26.57
Model Residual		19 76	2052.65394 77.2428795	Prok R-sc	) > F Juared	= 0.0000 = 0.8692
Total	44870.8838	95	472.325092	- Adj 2 Root	R-squared MSE	= 0.8365 = 8.7888
totalpc	Coef.	Std. Err.	t	P> t	[95% Con	f. Interval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv8 monthdv9 monthdv10 monthdv11 monthdv12 yrdv2009 yrdv2010 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015 _cons	38.12723 -4.913947 6.902466 8.429893 -2.037036 -3.945783 -2.921584 -1.5926 -1.880935 6.614844 2.522382 13.81227 11.4396 10.75083 22.79517 47.50771 36.71131 35.73114 35.40151 51.85212	4.898754 4.394396 4.394396 4.394396 4.436855 4.436855 4.436855 4.436855 4.436855 4.436855 4.436855 4.436855 4.394396 3.58801 3.58801 3.58801 3.58801 3.58801 3.58801 3.58801 3.58801 3.58801 3.58801 3.58801 3.58801 3.58801 3.58801 3.58801	7.78 -1.12 1.57 1.92 -0.46 -0.89 -0.66 -0.36 -0.42 1.49 0.57 3.14 3.19 3.00 6.35 13.16 9.31 9.96 9.87 13.21	0.000 0.267 0.120 0.059 0.647 0.512 0.721 0.673 0.140 0.571 0.002 0.002 0.004 0.000 0.000 0.000 0.000 0.000	28.37052 -13.66615 -1.849733 -3223064 -10.8738 -12.78255 -11.75835 -10.42936 -10.7177 -2.221919 -6.314381 5.060075 4.293458 3.604687 15.64903 40.31547 28.85992 28.58499 28.25537 44.03237	47.88394 3.838252 15.65466 17.18209 6.799727 4.890981 5.915179 7.244164 6.955828 15.45161 11.35915 22.56447 18.58574 17.89697 29.94131 54.69996 44.5627 42.87728 42.54765 59.67188
IA						
Source	l SS	df	MS		per of obs 9, 76)	= 96 = 13.14
Model Residual	1512096.78 460355.692	19 76	79584.041 6057.31174	L Prok 1 R-sc	) > F quared	= 0.0000 = 0.7666
Total	1972452.47	95	20762.6576		R-squared MSE	= 0.7083 = 77.829
totalpc	Coef.	Std. Err.	t	P> t	[95% Con	f. Interval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv8 monthdv9 monthdv10 monthdv11 monthdv12 yrdv2009 yrdv2010 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015 _cons	172.4375 -26.71663 3.213428 -128.4265 -210.2264 -238.4522 -249.0776 -214.3535 -177.3963 -115.136 -57.59405 29.23103 31.11344 41.48921 189.9346 86.4409 74.62957 41.1684 93.71498 414.6587	43.38068 38.91437 38.91437 39.29036 39.29036 39.29036 39.29036 39.29036 39.29036 39.29036 39.29036 39.29036 39.29036 31.77345 31.77345 31.77345 31.77345 31.77345 31.77345 31.77345 31.77345 31.77345 31.77345 31.77345	3.97 -0.69 0.08 -3.30 -5.35 -6.07 -6.34 -5.46 -4.52 -2.93 -1.47 0.75 0.98 1.31 5.98 2.70 2.14 1.30 2.95 11.93	0.000 0.494 0.934 0.001 0.000 0.000 0.000 0.000 0.000 0.004 0.147 0.455 0.331 0.196 0.000 0.008 0.008 0.008	86.03739 -104.2213 -74.29125 -205.9312 -288.4799 -316.7057 -327.3311 -292.607 -255.6498 -193.3896 -135.8476 -48.27365 -32.16887 -21.7931 126.6523 22.75032 5.101931 -22.11391 30.43267 345.4112	80.71811 -50.92186

Source	ļ SS	df	MS	Numbe F(19,	r of obs	= 96 = 31.79
Model Residual	2390331.87 300726.14	76		Prob R-squ	> F ared	= 0.0000 = 0.8882
Total	2691058.01	95	28326.9264		-squared MSE	= 0.8603 = 62.904
totalpc	Coef.	Std. Err.	t	P> t	[95% Con	f. Interval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv8 monthdv10 monthdv11 monthdv12 yrdv2009 yrdv2010 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015cons	344.3781 117.9715 149.7184 22.09369 -16.74895 -45.22548 -85.50293 .9497087 51.16426 86.28694 95.79326 292.4334 -13.57005 -57.4302 15.24236 138.273 101.7046 125.9367 143.9752 489.8664	35.06188 31.45204 31.45204 31.75593 31.75593 31.75593 31.75593 31.75593 31.75593 31.75593 31.75593 31.45204 25.68048 25.68048 25.68048 25.68048 25.68048 25.68048 25.68048 25.68048 25.68048	3.75 4.76 0.70 -0.53 -1.42 -2.69 0.03 1.61 2.72 3.02 9.30 -0.53 -2.24 0.59 5.35 3.60 4.90 5.61	0.000 0.000 0.000 0.485 0.599 0.158 0.009 0.976 0.111 0.008 0.003 0.000 0.599 0.028 0.555 0.000 0.001 0.000 0.000 0.000	274.5463 55.32936 87.07627 -40.54847 -79.99636 -108.4729 -148.7503 -62.29771 -12.08316 23.03952 32.54585 229.7912 -64.71716 -108.5773 -35.90475 86.79586 45.5098 74.78959 92.82808 433.898	180.6137 212.3606 84.73586 46.49847 18.02194 -22.25551 64.19712 114.4117 149.5344 159.0407 355.0756 37.57707 -6.28308 66.38947 189.7501 157.8994 177.0838 195.1223
IL						
Course	ı cc	d£	MC	Numbo	r of obc	- 06
Source	SS 	df 	MS	F(19,		= 96 = 20.68
Source Model Residual	SS 3775107.97 730170.244	19	MS 198689.893 9607.50321	F(19, Prob R-squ	76) > F ared	= 20.68 = 0.0000 = 0.8379
Model Residual	   3775107.97	19 76	198689.893	F(19, Prob R-squ Adj R	76) > F ared -squared	= 20.68 = 0.0000
Model Residual	3775107.97 730170.244	19 76	198689.893 9607.50321 	F(19, Prob R-squ Adj R Root	76) > F ared -squared MSE	= 20.68 = 0.0000 = 0.8379 = 0.7974
Model Residual Total	3775107.97 730170.244 	19 76 95	198689.893 9607.50321 	F(19, Prob R-squ Adj R Root	76) > F ared -squared MSE	= 20.68 = 0.0000 = 0.8379 = 0.7974 = 98.018 

Source	l SS	df	MS		of obs	= 96
Model Residual	13378328.4   4836276.79	76	704122.549 63635.2209	R-squa	F red	= 11.06 = 0.0000 = 0.7345
Total	18214605.2	95	191732.686		squared SE	= 0.6681 = 252.26
totalpc	Coef.	Std. Err.	t I	P> t	[95% Con	f. Interval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv8 monthdv10 monthdv11 monthdv12 yrdv2009 yrdv2010 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015cons	187.1837 89.0392 112.9935 -16.88524 -65.4844 -93.46664 -98.42818 -8.491512 3.986568 165.1746 396.4906 488.304 68.01733 158.5609 174.9182 305.3611 409.7102 532.6537 1070.479 204.1199	140.6064 126.1301 126.1301 126.1301 127.3488 127.3488 127.3488 127.3488 127.3488 127.3488 127.3488 126.1301 102.9848 102.9848 103.6492 113.1484 102.9848 102.9848 102.9848	0.71 0.90 -0.13 -0.51 -0.77 -0.07 -0.03 1.30 3.11 3.87 0.66 1.54 1.70 2.95 3.62 5.17 10.39	0.482 0.373 0.894 0.609 0.465 0.947 0.975 0.199 0.003 0.000 0.511 0.128 0.094 0.094 0.000 0.000 0.000	92.85826 -162.1707 -138.2164 -268.0951 -319.1215 -347.1037 -352.0653 -262.1286 -249.6505 -88.46249 142.8535 237.0941 -137.0947 -46.55115 -30.19378 98.92574 184.3557 327.5417 865.3666 -20.32653	340.2491 364.2034 234.3246 188.1527 160.1705 155.2089 245.1456 257.6237 418.8117 650.1277 739.5139 273.1294 363.6729 380.0303 511.7964 635.0647 737.7657 1275.591
KS						
Source	l SS	df	МС			- 06
		uı	MS		of obs	= 96
Model Residual	2587066.09 253101.828	19 76	136161.373 3330.28721	F(19, Prob > R-squa	76) F red	= 40.89 = 0.0000 = 0.9109
	2587066.09 253101.828	19	136161.373	F(19, Prob > R-squa Adj R-	76) F red squared	= 40.89 = 0.0000
Residual	2587066.09 253101.828	19 76	136161.373 3330.28721 29896.5044	F(19, Prob > R-squa Adj R-	76) F red squared SE	= 40.89 = 0.0000 = 0.9109 = 0.8886
Residual Total	2587066.09   253101.828 	19 76 95	136161.373 3330.28721 	F(19, Prob > R-squa Adj R- Root M 	76) F red squared SE	= 40.89 = 0.0000 = 0.9109 = 0.8886 = 57.709 

Source	SS	df	MS	Numbe F(19,	er of obs	=	96 44.48
Model Residual	3548554 319142.062	19 76	186766 4199.23765	6 Prob 5 R-squ	> F ıared	=	0.0000 0.9175
Total	3867696.07	95	40712.5902		R-squared MSE	=	0.8969 64.802
totalpc	Coef.	Std. Err.	t	P> t	[95% Con	f. ]	[nterval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv9 monthdv10 monthdv11 monthdv12 yrdv2009 yrdv2010 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015cons	250.4503 49.24721 -13.95671 -118.6412 -111.2428 -110.5783 -86.2653 22.41675 140.1239 123.0747 231.4181 467.0995 -8.181844 -28.00637 15.24404 103.1666 85.65962 98.68307 198.2067 417.2043	36.11949 32.40076 32.40076 32.40076 32.71382 32.71382 32.71382 32.71382 32.71382 32.71382 32.71382 32.71382 32.71382 32.71382 32.40076 26.45511 26.45511 26.62579 29.06597 26.45511 26.45511 26.45511 26.45511 28.94884	6.93 1.52 -0.43 -3.66 -3.40 -3.38 -2.64 0.69 4.28 3.76 7.07 14.42 -0.31 -1.06 0.58 3.87 2.95 3.73 7.49 14.41	0.000 0.133 0.668 0.000 0.001 0.001 0.010 0.495 0.000 0.000 0.758 0.293 0.566 0.000 0.004 0.000 0.000 0.000	178.5121 -15.2845 -78.48842 -183.1729 -176.398 -175.7335 -151.4205 -42.73847 74.96865 57.91952 166.2629 402.5677 -60.87177 -80.69629 -37.44589 50.13674 27.76973 45.99315 145.5168	-	322.3885 113.7789 50.575 -54.10947 -46.08756 -45.42304 -21.11008 87.57197 205.2791 188.23 296.5733 531.6312 44.50808 24.68355 67.93396 156.1965 143.5495 151.373 250.8967 474.8609
MA							
_							
Source	SS	df	MS	F(19,		= =	96 27.62
Source Model Residual	SS 380874.807 55159.5341	19	MS 20046.0425 725.783343	F(19, Frob R-squ	76) > F ared	= = =	27.62 0.0000 0.8735
Model	380874.807 55159.5341	19 76	20046.0425	F(19, Frob R-squ Adj R	76) > F lared R-squared	=	27.62 0.0000
Model Residual	380874.807 55159.5341	19 76	20046.0425 725.783343 	F(19, Frob R-squ Adj R	76) > F Jared R-squared MSE	= = = = =	27.62 0.0000 0.8735 0.8419
Model Residual Total	380874.807 55159.5341 436034.341	19 76 95	20046.0425 725.783343 	F(19, Frob R-squ Adj R Root	76) > F Jared R-squared MSE	= = = = = = = = = = = = = = = = = = =	27.62 0.0000 0.8735 0.8419 26.94

Source	SS	df	MS		of obs	= 96
Model	485740.471		25565.288	F(19, Prob >	F	= 5.40 = 0.0000
Residual	359538.446 	76	4730.76903	R-squa	red squared	= 0.5747 = 0.4683
Total	845278.917	95	8897.67282	Root M		= 68.781
totalpc	Coef.	Std. Err.	t F	P> t	[95% Cont	f. Interval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv8 monthdv10 monthdv11 monthdv12 yrdv2009 yrdv2010 yrdv2011 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015 _cons	-35.09122 3.012602 6.957766 -22.66888 -53.93399 -61.55937 -61.74967 -43.24157 30.4378 -4.955408 34.82855 53.53646 7.114455 -4.392483 15.58284 64.8554 204.9272 67.00897 43.07328 141.2603	38.33736 34.39029 34.39029 34.72257 34.72257 34.72257 34.72257 34.72257 34.72257 34.72257 34.72257 34.72257 34.72257 34.72257 34.72257 34.67256 28.07956 28.07956 28.26072 30.85073 28.07956 28.07956 28.07956 28.07956 28.07956 30.72641	0.09 0.20 -0.66 -1.55 -1.77 -1.78 -1.25 0.88 -0.14 1.00 1.56 0.25 -0.16 0.55 2.29 6.64 2.39 1.53	9.363 9.930 9.840 9.512 9.125 9.080 9.217 9.383 9.887 9.319 9.124 9.801 9.581 9.581 9.581 9.000 9.020 9.020	-111.4467 -65.4816 -61.53644 -91.16309 -123.09 -130.7154 -130.9057 -112.3976 -38.7182 -74.11141 -34.32745 -14.95775 -48.81083 -60.31777 -40.34245 8.569303 143.4826 11.08368 -12.852 80.06336	41.26426 71.50681 75.45197 45.82532 15.22201 7.596632 7.40633 25.91443 99.5938 64.20059 103.9846 122.0307 63.03974 51.5328 71.5328 71.50812 121.1415 266.3717 122.9343 98.99857 202.4573
ME						
Source	l SS	df	MS		of obs	= 96
Source Model Residual	SS 2104515.21 228503.573	df 19 76	MS 110763.958 3006.62596	F(19, Prob > R-squa	76) F red	= 36.84 = 0.0000 = 0.9021
Model	2104515.21 228503.573	19	110763.958	F(19, Prob > R-squa	76) F red squared	= 36.84 = 0.0000
Model Residual	2104515.21 228503.573	19 76	110763.958 3006.62596 	F(19, Prob > R-squa Adj R-	76) F red squared SE	= 36.84 = 0.0000 = 0.9021 = 0.8776
Model Residual Total	2104515.21 228503.573 2333018.78	19 76 95	110763.958 3006.62596 	F(19, Prob > R-squa Adj R- Root M	76) F red squared SE	= 36.84 = 0.0000 = 0.9021 = 0.8776 = 54.833

Source	SS	df	MS		of obs	= 96
Model   Residual	+   678205.514   145317.926	19 76	35695.0271 1912.07798		• F	= 18.67 = 0.0000 = 0.8235
Total		95	8668.6678	Adj R-	squared	= 0.7794 = 43.727
Ισται	023323.441	33	0000.0070	NOOL 1	IJL	- 43.727
totalpc	Coef.	Std. Err.	t	P> t	[95% Con	f. Interval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv8 monthdv9 monthdv10 monthdv11 monthdv12 yrdv2009 yrdv2010 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015cons	184.7478 34.74451 86.87035 22.81327 -19.50785 -46.67731 -49.84815 -7.39218 37.22326 57.83349 92.03932 117.6937 5.440456 -5.599964 1.540239 48.00977 63.2513 57.02281 121.3222 272.2198	24.37301 21.86366 21.86366 21.86366 22.0749 22.0749 22.0749 22.0749 22.0749 22.0749 21.86366 17.8516 17.8516 17.96677 19.61338 17.8516 17.8516 17.8516	1.59 3.97 1.04 -0.88 -2.11 -2.26 -0.33 1.69 2.62 4.17 5.38 0.30 -0.31 0.09 2.67 3.22 3.19 6.80	0.000 0.116 0.000 0.300 0.380 0.038 0.027 0.739 0.096 0.011 0.000 0.761 0.755 0.931 0.099 0.092 0.002 0.002 0.000	136.2048 -8.800736 43.3251 -20.73198 -63.47383 -90.64329 -93.81413 -51.35816 -6.742727 13.86751 48.07334 74.14848 -30.11409 -41.15451 -34.01431 12.22584 24.18788 21.46826 85.76764 233.3138	233.2909 78.28976 130.4156 66.35852 24.45813 -2.711328 -5.882167 36.5738 81.18924 101.7995 136.0053 161.239 40.995 29.95458 37.09478 83.709478 83.79371 102.3147 92.57735 156.8767 311.1258
MN						
Source	SS	df	MS		of obs	= 96
Source   Model   Residual	SS 3275795.25 308002.955	df 19 76	MS 172410.276 4052.67046	F(19, Prob > R-squa	76) F ared	= 42.54 = 0.0000 = 0.9141
Model	3275795.25 308002.955	19	172410.276 4052.67046	F(19, Prob > R-squa Adj R-	76) F ared squared	= 42.54 = 0.0000
Model Residual	3275795.25 308002.955	19 76	172410.276 4052.67046 	F(19, Prob > R-squa Adj R-	76) F ared squared ISE	= 42.54 = 0.0000 = 0.9141 = 0.8926
Model Residual Total	3275795.25 308002.955 3583798.2	19 76 95	172410.276 4052.67046 	F(19, Prob > R-squa Adj R- Root M	76) F ared squared ISE	= 42.54 = 0.0000 = 0.9141 = 0.8926 = 63.661

SS	df	MS			= 96 = 36.41
3935948.54 432391.494	19 76	5689.36176	6 Prob 6 R-sc	) > F guared	= 0.0000 = 0.9010
4368340.03	95			K-Squared L MSE	= 0.8763 = 75.428
Coef.	Std. Err.	t	P> t	[95% Conf	. Interval]
351.4965 100.5969 80.90374 -58.40258 -103.939 -130.4206 -129.5194 -34.92733 -48.44602 74.50712 168.0835 311.1423 44.97739 33.73084 95.29355 228.3717 212.4073 258.3395 348.9095 433.1129	42.04246 37.71393 37.71393 37.71393 38.07832 38.07832 38.07832 38.07832 38.07832 38.07832 38.07832 37.71393 30.79329 30.79329 30.79329 30.79329 30.79329 30.79329 30.79329 33.83228 30.79329 30.79329 30.79329 33.69596	8.36 2.67 2.15 -1.55 -2.73 -3.43 -3.40 -0.92 -1.27 1.96 4.41 8.25 1.46 1.10 3.09 7.37 6.28 8.39 11.33	0.000 0.009 0.035 0.126 0.008 0.001 0.001 0.362 0.207 0.054 0.000 0.000 0.148 0.277 0.003 0.000 0.000 0.000 0.000	267.7616 25.48312 5.789944 -133.5164 -179.7785 -206.2602 -205.359 -110.7669 -124.2856 -1.332429 92.2439 236.0285 -16.35277 -27.59932 33.96339 166.6458 145.0244 197.0093 287.5794 366.0016	435.2313 175.7107 156.0175 16.71122 -28.09941 -54.58106 -53.67986 40.91222 27.39353 150.3467 243.923 386.2561 106.3075 95.061 156.6237 290.0975 279.7901 319.6697 410.2397 500.2242
SS	df	MS			= 96 = 56.00
4857937.5 346985.089	19 76		1 Prok 8 R-sc	o`> F` quared	= 0.0000 = 0.9333
5204922.59	95	54788.6589			= 0.9167 = 67.569
Coef.	Std. Err.	t	P> t	[95% Conf	. Interval]
251.0593 123.7912 -19.80405 -145.7839 -138.8017 -159.5708 -117.9951 -13.32504 9.950217 74.36147 318.3727 546.8063 -41.35921 -35.28712 5.978302 87.66362 50.02493 86.18215 190.9573 472.0388	37.66214 33.78459 33.78459 34.11102 34.11102 34.11102 34.11102 34.11102 34.11102 34.11102 34.11102 34.11102 34.78459 27.585 27.585 27.76297 30.30736 27.585 27.585 27.585 27.585 27.585	6.67 3.66 -0.59 -4.32 -4.07 -4.68 -3.46 -0.39 0.29 2.18 9.33 16.150 -1.28 0.22 3.16 1.65 3.12 6.92 15.64	0.000 0.000 0.559 0.000 0.000 0.000 0.001 0.697 0.771 0.032 0.000 0.138 0.205 0.829 0.002 0.103 0.003 0.000 0.000	176.0486 56.50339 -87.09189 -213.0718 -206.7396 -227.5088 -185.9331 -81.26302 -57.98776 6.423492 250.4347 479.5185 -96.2995 -90.22741 -48.96199 32.36888 -10.33742 31.24186 136.017 411.9197	326.0699 191.0791 47.48378 -78.49609 -70.8637 -91.63281 -50.05713 54.61294 77.88819 142.2994 386.3107 614.0942 13.58108 19.65317 60.91859 142.9584 110.3873 141.1224 245.8976 532.1579
	3935948.54 432391.494	3935948.54	3935948.54 432391.494 76 5689.36176 4368340.03 95 45982.5266  Coef. Std. Err. t  351.4965 42.04246 8.36 100.5969 37.71393 2.15 -58.40258 37.71393 -1.55 -103.939 38.07832 -2.73 -130.4206 38.07832 -3.43 -129.5194 38.07832 -3.40 -34.92733 38.07832 -3.40 -34.92733 38.07832 -1.27 74.50712 38.07832 1.96 168.0835 38.07832 4.41 311.1423 37.71393 8.25 -168.0835 38.07832 4.41 331.1423 37.71393 8.25 44.97739 30.79329 1.46 33.73084 30.79329 1.10 95.29355 30.79329 3.09 228.3717 30.99196 7.37 212.4073 33.83228 6.28 258.3395 30.79329 8.39 348.9095 30.79329 11.33 433.1129 33.69596 12.85  SS df MS  Coef. Std. Err. t  251.0593 37.66214 6.67 123.7912 33.78459 -0.59 -145.7839 33.78459 -0.59 -145.7850	Section	3935948.54 432391.494 76 5689.36176 A37.3914.944 76 5689.36176 R-squared Adj R-squared Adj R-squared Adj R-squared Root MSE  Coef. Std. Err. t P> t  [95% Conf  351.4965 42.04246 8.36 0.000 267.7616 100.5969 37.71393 2.67 0.009 25.48312 80.9374 37.71393 2.15 0.035 5.788944 -58.40258 37.71393 -1.55 0.126 -1.33.5164 -103.939 38.07832 -2.73 0.008 -179.7785 -130.4206 38.07832 -3.44 0.001 -206.2602 -129.5194 38.07832 -3.40 0.001 -206.5.359 -48.44602 38.07832 -1.27 0.207 -124.2856 -48.44602 38.07832 -1.27 0.207 -124.2856 -48.44602 38.07832 -1.96 0.054 -1.332429 168.0835 38.07832 4.41 0.000 92.2439 311.1423 37.71393 8.25 0.000 236.0285 44.97793 30.79329 1.46 0.148 -16.35277 33.73084 30.79329 1.46 0.148 -16.35277 33.73084 30.79329 1.40 0.277 -27.58932 228.3717 30.99196 7.37 0.000 166.6458 212.4073 33.83228 6.28 0.000 145.0244 258.3395 30.79329 3.09 0.003 33.96339 228.3717 30.99196 7.37 0.000 166.6458 212.4073 33.83228 6.28 0.000 179.0093 348.9095 30.79329 11.33 0.000 287.5794 433.1129 33.69596 12.85 0.000 366.0016  SS df MS Number of obs F(19, 76) 4857937.5 19 255680.921 Prob > F 346985.089 37.66214 6.67 0.000 176.0486 123.7912 33.78459 3.66 0.000 266.0016  SS df MS Number of obs F(19, 76) -18.80405 33.78459 3.66 0.000 366.0016  SS df MS Number of obs F(19, 76) -19.80405 33.78459 -0.59 0.559 -87.09189 -145.7839 33.78459 3.66 0.000 226.7396 -159.5708 34.11102 -4.68 0.000 -227.5088 -117.9951 34.11102 -3.46 0.001 -185.9331 -13.32504 34.11102 -3.46 0.001 -185.9331 -13.32504 34.11102 -3.46 0.001 -185.9331 -13.32504 34.11102 -3.46 0.001 -185.9331 -13.32504 34.11102 -3.46 0.001 -185.9331 -13.32504 34.11102 -3.46 0.001 -185.9331 -13.32504 34.11102 -3.46 0.001 -185.9331 -13.32504 34.11102 -3.46 0.001 -227.5088 -13.32504 34.11102 -3.46 0.001 -227.5088 -13.32504 34.11102 -3.46 0.001 -227.5088 -13.32504 34.11102 -3.46 0.001 -38.9331 -13.32504 34.11102 -3.46 0.001 -38.9331 -13.32504 34.11102 -3.46 0.001 -38.9331 -33.32504 34.11102 -3.46 0.001 -38.9331 -33.32504 34.11102 -3.46 0.001 -38.9331 -33.32504 34.11102 -3.46 0.001 -38.9331 -3

Source	SS	df	MS		er of obs , 76)	=	96 29.30
Model   Residual		19 76	192661.801 6574.9181	L Prob L R-sqı	> F uared	= =	0.0000 0.8799
Total	4160268	95	43792.2947	7 Root	R-squared MSE	=	0.8499 81.086
totalpc	Coef.	Std. Err.	t	P> t	[95% Con	f.	Interval]
sandyhook   monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv8 monthdv9 monthdv11 monthdv12 yrdv2009 yrdv2010 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015cons	438.5341 177.3943 210.7182 103.8154 83.20275 22.90818 -7.811098 155.3936 222.7919 395.5253 173.3305 420.7477 30.66307 17.44505 77.19757 245.1946 153.1276 159.2581 197.2916 669.8026	45.19616 40.54293 40.54293 40.54293 40.93466 40.93466 40.93466 40.93466 40.93466 40.93466 40.93466 40.54293 33.10317 33.10317 33.31674 36.37012 33.10317 33.10317 33.10317 36.22356	9.70 4.38 5.20 2.56 2.03 0.56 -0.19 3.80 5.44 9.66 4.23 10.38 0.93 0.53 2.33 7.36 4.21 4.21 4.81 5.96 18.49	0.000 0.000 0.000 0.012 0.046 0.577 0.849 0.000 0.000 0.000 0.000 0.357 0.600 0.022 0.000 0.000 0.000 0.000	348.5181 96.64601 129.9699 23.06715 1.674303 -58.62027 -89.33954 73.86517 141.2635 313.9969 91.80205 339.9995 -35.2676 -48.48562 11.2669 178.8368 80.69027 93.32743 131.3609 597.6571		528.5501 258.1425 291.4664 184.5637 164.7312 104.4366 73.71735 236.9221 304.3204 477.0538 254.8589 501.496 96.59374 83.37572 143.1282 311.5507 225.565 225.1888 263.2223 741.948
ND							
Source	SS	df	MS		er of obs , 76)	=	96 38.73
Model   Residual	4704732.08 485860.387	19 76	247617.478 6392.89982	B Prob 2 R-sqi	, , , , > F uared R-squared	= =	0.0000 0.9064 0.8830
Total	5190592.47	95	54637.8155			=	79.956
totalpc	Coef.	Std. Err.	t	P> t	[95% Con	f.	Interval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv8 monthdv10 monthdv11 monthdv11 yrdv2019 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015 _cons	347.0636 47.01929 115.1305 61.80479 4.815882 -80.99125 -101.4097 5.701727 136.9645 403.4474 201.2022 254.4341 7.557312 -11.82256 148.6294 384.6417 279.0306 200.9173 170.8744 506.1559	44.56617 39.97781 39.97781 39.97781 40.36407 40.36407 40.36407 40.36407 40.36407 40.36407 40.36407 39.97781 32.64174 32.64174 32.64174 32.64174 32.64174 32.64174 32.64174	7.79 1.18 2.88 1.55 0.12 -2.01 -2.51 0.14 3.39 10.00 4.98 6.36 0.23 -0.36 4.55 11.71 7.78 6.16 5.23 14.17	0.000 0.243 0.005 0.126 0.905 0.048 0.014 0.888 0.001 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	258.3024 -32.60341 35.50784 -17.81791 -75.57614 -161.3833 -181.8017 -74.69029 56.57243 323.0554 120.8102 174.8114 -57.45435 -76.83422 83.61772 319.2106 207.603 135.9057 105.8627 435.0161		435.8248 126.642 194.7532 141.4275 85.2079 5992306 -21.01769 86.09375 217.3565 483.8394 281.5942 334.0568 72.56897 53.1891 213.641 450.0728 350.4583 265.929 235.8861 577.2957

SS	df	MS			= 96 = 29.10
	19 76	2453.5862	5 Prol 6 R-se	b > F guared	= 0.0000 = 0.8791
1542879.94	95		- Adj 5 Roo	t MSE	= 0.8489 = 49.534
Coef.	Std. Err.	t	P> t	[95% Conf	. Interval]
268.8909 -20.50587 3.181551 -74.01582 -106.6735 -125.7417 -127.7015 -66.8742 -51.08461 23.34861 84.47205 180.3489 10.23053 2.88731 35.37883 100.5901 55.99834 40.94081 86.1673 285.9515	27.6094 24.76684 24.76684 25.00614 25.00614 25.00614 25.00614 25.00614 25.00614 25.00614 25.00614 25.00614 24.76684 20.22204 20.22204 20.22204 20.2551 22.21776 20.22204 20.22204 20.22204 20.22204 20.22204 20.22204 20.22204 20.22204 20.22204	9.74 -0.83 -2.99 -4.27 -5.03 -5.11 -2.67 -2.67 -2.64 0.93 3.38 7.28 0.51 0.14 1.75 4.94 2.52 2.02 4.26 12.92	0.000 0.410 0.898 0.004 0.000 0.000 0.000 0.009 0.045 0.353 0.001 0.614 0.887 0.084 0.084 0.090 0.014 0.046 0.000	213.902 -69.83332 -46.14589 -123.3433 -156.4775 -175.5458 -177.5055 -116.6783 -100.8887 -26.45544 34.668 131.0214 -30.04516 -37.38838 -4.896861 60.05461 11.74784 .6651223 45.89161 241.8793	323.8798 28.82157 52.509 -24.68837 -56.86945 -75.93769 -77.89744 -17.07015 -1.280558 73.15266 134.2761 229.6763 50.50622 43.163 75.65452 141.1257 100.2488 81.2165 126.443 330.0237
SS	df	MS			= 96 = 28.28
4794056.58 678018.031	19 76		8 Prol 8 R-s	b > F quared	= 0.0000 = 0.8761
5472074.61	95	57600.785			= 0.8451 = 94.453
Coef.	Std. Err.	t	P> t	[95% Conf	. Interval]
495.9406 -39.16997 73.81144 19.09424 -19.3516 -66.20596 -83.39833 -22.28246 3.115112 97.2369 90.29302 201.6669 55.71362 79.78222 148.9642 340.8718 339.2733 356.2118 430.7001 404.9172	52.64658 47.22629 47.22629 47.68259 47.68259 47.68259 47.68259 47.68259 47.68259 47.68259 47.68259 47.68259 47.68259 47.2629 38.5601 38.5601 38.5601 38.5601 38.5601 38.5601 38.5601 38.5601	9.42 -0.83 1.56 0.40 -0.41 -1.39 -1.75 -0.47 2.04 1.89 4.27 1.44 2.07 3.86 8.78 8.01 9.24 11.17 9.60	0.000 0.409 0.122 0.687 0.686 0.169 0.084 0.642 0.948 0.045 0.062 0.000 0.153 0.042 0.000 0.000 0.000 0.000 0.000	391.0859 -133.2293 -20.24786 -74.96507 -114.3197 -161.1741 -178.3664 -117.2506 -91.853 2.268782 -4.675097 107.6076 -21.08548 2.983118 72.1651 263.5773 254.8949 279.4127 353.901 320.8788	600.7954 54.88934 167.8708 113.1536 75.61651 28.76215 11.56978 72.68566 98.08323 192.205 185.2611 295.7262 132.5127 156.5813 225.7633 418.1664 423.6517 433.0109 507.4992 488.9556
	1356407.39 186472.556	1356407.39 19 186472.556 76  1542879.94 95  Coef. Std. Err.  268.8909 27.6094 -20.50587 24.76684 3.181551 24.76684 -74.01582 24.76684 -106.6735 25.00614 -125.7417 25.00614 -127.7015 25.00614 -51.08461 25.00614 23.34861 25.00614 23.34861 25.00614 23.34861 25.00614 23.34861 25.00614 23.3489 24.76684 10.23053 20.22204 2.88731 20.22204 35.37883 20.22204 2.88731 20.22204 35.37883 20.22204 2.88731 20.22204 2.88731 20.22204 2.88731 20.22204 2.88731 20.22204 35.37883 20.22204 2.88731 20.22204 35.37883 70.22204 2.88731 20.22204 35.37883 70.22204 2.88731 20.22204 35.37883 70.22204 2.88731 20.22204 35.37883 70.22204 35.37883 70.22204 35.37883 70.22204 35.37883 70.22204 35.37883 70.22204 35.37883 70.22204 35.37883 70.22204 35.37883 70.22204 36.1673 70.22204 36.1673 70.22204 36.1673 70.22204 36.1689 70.22204 37.68259 37.381144 70.22629 38.5601 37.2369 70.2369 70.68259 97.2369 70.2369 70.2369 97.2369 70.2369 97.2369 70.2369 97.2369 70.2369 97.2369 70.2369 97.2369 70.2369 97.2369 70.2369 97.2369 70.2369 97.2369 70.2369 97.2369 70.2369 97.2369 70.2369	1356407.39	1356407.39	1356407.39

Source	SS	df	MS		er of obs , 76)	=	96 36.41
Model Residual		76		i Prob i R-sqi	> F uared	=	0.0000 0.9010
Total	62007.2649	95	652.708052		R-squared MSE	=	0.8763 8.9869
totalpc	Coef.	Std. Err.	t	P> t	[95% Con	f.	Interval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv8 monthdv10 monthdv11 monthdv12 yrdv2009 yrdv2010 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015cons	1.957639 -1.286759 11.24132 3.776049 5.15196 2.004594 -2.308153 -1.321888 -5.062764 3.582153 12.41369 18.86169 14.0871 9.054081 18.01594 41.68147 72.91265 47.29868 44.98792 34.84664	5.0092 4.493472 4.493472 4.493472 4.536888 4.536888 4.536888 4.536888 4.536888 4.536888 4.536888 4.493472 3.668904 3.668904 3.668904 3.668904 3.668904 3.668904 4.014745	-0.29 2.50 0.84 1.14 0.44 -0.51 -0.29 -1.12 0.79 2.74 4.20 3.84 2.47 4.91 11.29 18.09 12.89 12.26	0.697 0.775 0.015 0.403 0.260 0.660 0.612 0.772 0.268 0.432 0.008 0.000 0.000 0.000 0.000 0.000 0.000	-8.019048 -10.23628 2.291792 -5.173475 -3.884035 -7.031402 -11.34415 -10.35788 -14.09876 -5.453843 3.377697 9.912167 6.779845 1.746825 10.70868 34.32707 64.88424 39.99142 37.68067 26.85058		11.93433 7.662766 20.19084 12.72557 14.18796 11.04059 6.727842 7.714107 3.973231 12.61815 21.44969 27.81122 21.39436 16.36134 25.32319 49.03587 80.94106 54.60594 52.29518 42.8427
NM Source							
	l cc	٩£	MC	Numba	or of obc	_	06
Model	SS    1387683.93   144712.481		MS  73035.9964 1904.11159	F(19 Prob	er of obs , 76) > F uared	= = =	96 38.36 0.0000 0.9056
	1387683.93 144712.481			F(19 Prob R-sqi Adj I	, 76) > F uared R-squared	=	38.36 0.0000
Model Residual	1387683.93 144712.481	19 76	73035.9964 1904.11159  16130.4886	F(19 Prob R-sqi Adj I	, 76) > F uared R-squared MSE	= = = = =	38.36 0.0000 0.9056 0.8820
Model Residual Total	1387683.93 144712.481 1532396.41	19 76 95	73035.9964 1904.11159 16130.4886 9.01 5.43 4.69 -0.53 -0.65 -1.54 -1.74 0.59 -0.00 2.53 4.01 11.12 -0.15 0.02 1.33 6.42 5.69 6.66 8.49	F(19, Prob R-sqi Adj I Root	, 76) > F uared R-squared MSE	= = = = = = = = = = = = = = = = = = =	38.36 0.0000 0.9056 0.8820 43.636

Source	SS	df	MS	Numbe F(19,	er of obs	= 96 = 19.06
Model Residual	158111.752	76	39646.9436 2080.4178	i Prob R-squ	> F uared	= 0.0000 = 0.8265
Total	911403.68	95	9593.72295		R-squared MSE	= 0.7831 = 45.612
totalpc	Coef.	Std. Err.	t	P> t	[95% Con	f. Interval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv8 monthdv10 monthdv11 monthdv12 yrdv2009 yrdv2010 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015cons	214.8492 45.01694 62.51618 12.12143 .9014163 -25.99583 -39.72223 -10.58643 -25.76686 -2.470044 56.63532 165.1574 34.07315 23.88645 64.81994 125.7106 67.94671 43.61489 68.35709 279.3076	25.42328 22.8058 22.8058 22.8058 23.02615 23.02615 23.02615 23.02615 23.02615 23.02615 23.02615 23.02615 23.02615 23.02615 23.02615 23.02615 23.02615 20.4585 18.62086 18.74099 20.45855 18.62086 18.62086 18.62086 18.62086	1.97 2.74 0.53 0.04 -1.13 -0.46 -1.12 -0.11 2.46 7.24 1.83 1.28 3.48 6.71 3.2 2.34 3.67	0.000 0.052 0.008 0.597 0.969 0.262 0.089 0.647 0.267 0.915 0.016 0.000 0.071 0.203 0.001 0.000 0.001 0.002 0.001 0.022	164.2144 4047414 17.09449 -33.30026 -44.95914 -71.85638 -85.58278 -56.44698 -71.62741 -48.3306 10.77477 119.7357 -3.013499 -13.2002 27.73329 88.38467 27.19998 6.528236 31.27044 238.725	90.43863 107.9379 57.54311 46.76197 19.86472 6.138324 35.27413 20.09369 43.39051 102.4959 210.579 71.1598 60.9731 101.9066 163.0365 108.6934 80.70154 105.4437
NY						
Source	SS	df	MS	F(19,		= 96 = 25.48
Source   Model   Residual	SS 107951.456 16948.2734	19	MS 5681.65559 223.003597	F(19, Prob R-squ	, 76) > F uared	= 25.48 = 0.0000 = 0.8643
Model	107951.456 16948.2734	19 76	5681.65559	F(19, Prob R-squ Adj F	, 76) > F uared R-squared	= 25.48 = 0.0000
Model   Residual	107951.456 16948.2734	19 76	5681.65559 223.003597 	F(19, Prob R-squ Adj F	, 76) > F Jared R-squared MSE	= 25.48 = 0.0000 = 0.8643 = 0.8304
Model   Residual   Total	107951.456 16948.2734 124899.73	19 76 95	5681.65559 223.003597	F(19, Prob R-squ Adj F Root	, 76) > F Jared R-squared MSE	= 25.48 = 0.0000 = 0.8643 = 0.8304 = 14.933 

Source	SS	df	MS		per of obs 9, 76)	=	96 35.81
Model   Residual		76	104300.31 2912.4781	1 Prok 5 R-so	) > F guared	=======================================	0.0000 0.8995
Total	2203054.23	95	23190.0445	- Auj 5 Root	R-squared MSE	=	0.8744 53.967
totalpc	Coef.	Std. Err.	t	P> t	[95% Con	f.	Interval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv8 monthdv9 monthdv10 monthdv11 monthdv12 yrdv2009 yrdv2010 yrdv2011 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015cons	231.5785 75.36866 79.97498 5.951134 -36.87466 -57.02408 -46.22523 -19.82396 -8.751124 47.26375 170.7586 238.4649 32.63937 30.66284 85.20433 181.3165 159.8605 175.2569 283.8011 215.8708	30.08068 26.98369 26.98369 27.24441 27.24441 27.24441 27.24441 27.24441 27.24441 27.24441 27.24441 26.98369 22.03209 22.03209 22.03209 22.17423 24.20644 22.03209 22.03209 24.1089	7.70 2.79 2.96 0.22 -1.35 -2.09 -1.70 -0.73 -0.32 1.73 6.27 8.84 1.48 1.39 3.87 8.18 6.60 7.95 12.88 8.95	0.000 0.007 0.004 0.826 0.180 0.040 0.094 0.469 0.749 0.087 0.000 0.143 0.168 0.000 0.000 0.000 0.000 0.000	171.6676 21.62598 26.2323 -47.79154 -91.1366 -111.286 -100.4872 -74.0859 -63.01307 -6.99819 116.4967 184.7223 -11.24134 -13.21787 41.32361 137.1527 111.6492 131.3762 239.9204 167.8537		291.4893 129.1113 133.7177 59.69381 17.38728 -2.762136 8.036712 34.43798 45.51082 101.5257 225.0206 292.2076 76.52009 74.54355 129.085 225.4803 208.0718 219.1377 327.6818 263.8878
0K							
Source	SS	df	MS		per of obs 9, 76)	=	96 41.93
Model   Residual	4577381.83 436700.448	19 76	240914.833 5746.05852	3 Prob 2 R-sc	y > F quared R-squared	= =	0.0000 0.9129 0.8911
Total	5014082.28	95	52779.813		MSE	=	75.803
totalpc	Coef.	Std. Err.	t	P> t	[95% Con	 f.	Interval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv8 monthdv10 monthdv11 monthdv12 yrdv2009 yrdv2010 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015cons	355.6615 107.683 5.432922 -79.37086 -127.0475 -154.6751 -133.7422 -45.24574 -72.16723 7.245081 224.2788 389.1239 22.44907 15.12443 94.84643 270.2429 201.2546 245.2144 262.1118 493.2203	42.25143 37.90138 37.90138 37.90138 38.26759 38.26759 38.26759 38.26759 38.26759 38.26759 37.90138 30.94635 30.94635 31.146 34.00044 30.94635 30.94635 31.36344	8.42 2.84 0.14 -2.09 -3.32 -4.04 -3.49 -1.18 -1.89 0.19 5.86 10.27 0.73 0.49 3.06 8.68 5.92 7.92 8.47 14.56	0.000 0.006 0.886 0.040 0.001 0.000 0.001 0.241 0.063 0.850 0.000 0.470 0.626 0.003 0.000 0.000 0.000 0.000 0.000	271.5105 32.1959 -70.05422 -154.858 -203.264 -230.8916 -209.9587 -121.4622 -148.3837 -68.97142 148.0623 313.6368 -39.18592 -46.51057 33.21144 208.2103 133.5369 183.5795 200.4768 425.7755		439.8126 183.1702 80.92006 -3.883724 -50.83097 -78.45856 -57.52566 30.97077 4.049276 83.46158 300.4953 464.6111 84.08407 76.75942 156.4814 332.2756 268.9724 306.8494 323.7468 560.6652

Source	SS	df	MS		of obs	= 96
Model Residual	1623607.85   252120.248	19 76	85453.0449 3317.37169	R-squa	F red	= 25.76 = 0.0000 = 0.8656
Total	1875728.1	95	19744.5063		squared SE	= 0.8320 = 57.597
totalpc	Coef.	Std. Err.	t i	P> t	[95% Cont	f. Interval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv8 monthdv9 monthdv10 monthdv11 monthdv12 yrdv2009 yrdv2011 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015 _cons	250.3293 70.76785 103.8788 12.39168 -19.63666 -49.11122 -78.2587 -38.72972 18.22843 27.93969 100.432 251.4507 7.119446 3.569272 54.13861 152.0607 100.7295 112.2532 173.3648 364.4809	32.10358 28.79831 28.79831 29.07657 29.07657 29.07657 29.07657 29.07657 29.07657 29.07657 29.07657 29.07657 23.51373 23.51373 23.51373 23.51373 23.51373 23.51373 23.51373 23.51373	2.46 3.61 0.43 -0.68 -1.69 -2.69 -1.33 0.63 0.96 3.45 8.73 0.30 0.15 2.30 6.43 3.90 4.77 7.37	0.502 0.095 0.009 0.187 0.533 0.340 0.001 0.000	186.3895 13.41103 46.52195 -44.96513 -77.54766 -107.0222 -136.1697 -96.64072 -39.68257 -29.97131 42.52103 194.0939 -39.7122 -43.26237 7.306971 104.9269 49.27607 65.42156 126.5332 313.2348	314.2691 128.1247 161.2356 69.7485 38.27433 8.799779 -20.34771 19.18128 76.13943 85.85069 158.343 308.8075 53.95109 50.40092 100.9703 199.1945 152.183 159.0848 220.1965 415.727
PA	i					
Source	ļ SS	df	MS	Number F(19,	of obs	= 96 = 27.16
Model Residual	2342695.62	40		LITA,		- 27.10
	344969.75	19 76	123299.77 4539.07566	Prob > R-squa	F red	= 0.0000 = 0.8716
Total				Prob > R-squa Adj R-s	F red squared	= 0.0000
Total   totalpc	+	76	4539.07566  28291.2145	Prob > R-squa Adj R-s	F red squared SE	= 0.0000 = 0.8716 = 0.8396
	2687665.37	76 95	4539.07566	Prob > R-squal Adj R-s Root MS  P> t  0.000 0.360 0.001 0.742 0.048 0.009 0.016 0.337 0.692 0.0143 0.000 0.143 0.000 0.335	F red squared SE	= 0.0000 = 0.8716 = 0.8396 = 67.373

Source	ļ SS	df	MS		per of obs = = = = = = = = = = = = = = = = = = =	
Model Residual		19 76	310147.45 7987.8369	7 Prob 1 R-sq	7, 70) = 0 > F = quared = R-squared =	0.0000 0.9066
Total	•		68419.760	8 Root	MSE =	
totalpc		Std. Err.		P> t	[95% Conf.	Interval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv8 monthdv10 monthdv11 monthdv12 yrdv2009 yrdv2011 yrdv2011 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015cons	97.77211 -50.38144 -107.2559 -158.9112 -153.1028 21.11244 123.3611 398.2786 286.0481 442.2388 6.586418 -6.952426 52.54199 195.0217 110.1797 165.3699 321.6813	49.81624 44.68735 44.68735 44.68735 45.11912 45.11912 45.11912 45.11912 45.11912 45.11912 45.11912 44.68735 36.48707 36.48707 36.72247 40.08798 36.48707 36.48707 36.48707 36.48707 36.48707 36.48707 39.92644	8.78 2.18 2.19 -1.13 -2.38 -3.52 -3.39 0.47 2.73 8.83 6.34 9.90 0.18 -0.19 1.44 5.31 2.75 4.53 8.82 14.24	0.000 0.032 0.032 0.263 0.020 0.001 0.001 0.641 0.008 0.000 0.000 0.857 0.849 0.154 0.000 0.007 0.000 0.000	337.972 8.370774 8.769539 -139.384 -197.1184 -248.7737 -242.9653 -68.75007 33.49857 308.4161 196.1856 353.2362 -66.08388 -79.62272 -20.1283 121.8826 30.33761 92.69959 249.011 489.0758	536.4073 186.3759 186.7747 38.62113 -17.39338 -69.04864 -63.24029 110.975 213.2236 488.1411 375.9106 531.2414 79.25671 65.71787 125.2123 268.1609 190.0219 238.0402 394.3516 648.1166
TN Source	l SS	df	MS	Numb	per of obs =	96
Model Residual	   4230917.45	19	222679.86 8676.1010	- F(19 6 Prob	9, 76) = 0 > F = quared =	25.67 0.0000
Total	   4890301.12		51476.853	- Adj	R-squared = MSE =	
totalpc	Coef.					
τοτατρο			t	P> t	[95% Conf.	Interval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv9 monthdv10 monthdv11 monthdv12 yrdv2009 yrdv2010 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015cons	324.1582 105.8321 24.20015 -102.9858 -103.565 -123.9817		t	P> t  0.000 0.026 0.605 0.031 0.010 0.112 0.866 0.230 0.629 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	[95% Conf. 220.7544 13.07436 -68.55761 -195.7436 -197.219 -217.6357 -169.3523 -85.66585 -150.5334 -70.8218 80.0936 304.0354 87.49235 85.85812 134.5404 196.1001 202.292 225.8638 372.9779 272.0158	Interval] 427.562 198.5899 116.9579 -10.22808 -9.911021 -30.32767 17.95567 101.6421 36.77462 116.4862 267.4016 489.5509 238.9651 237.3309 286.0132 348.5501 368.7136 377.3366 524.4507 437.7669

SS	df	MS				96 47
1203841.51 116107.731	76	1527.73333	2 Prol 1 R-so	o > F guared	= 0.000 = 0.91	00 20
1319949.24	95		- Auj 5 Root	K-Squared MSE	= 39.0	
Coef.	Std. Err.	t	P> t	[95% Cont	f. Interva	1]
222.3524 114.8438 143.5745 89.93562 -2.955127 -37.02654 -26.94137 17.17962 90.50235 140.8906 121.8758 165.3089 14.27797 29.55902 69.30158 146.925 112.4347 125.2303 166.7936 225.5132	21.78613 19.54311 19.54311 19.54311 19.73194 19.73194 19.73194 19.73194 19.73194 19.73194 19.73194 19.54311 15.95689 15.95689 15.95689 15.95689 15.95689 15.95689 17.53167 15.95689 17.53167	10.21 5.88 7.35 4.60 -0.15 -1.88 -1.37 0.87 4.59 7.14 6.18 8.46 0.89 1.85 4.34 9.15 6.41 7.85 10.45 12.92	0.000 0.000 0.000 0.000 0.881 0.064 0.176 0.387 0.000 0.000 0.000 0.374 0.068 0.000 0.000 0.000 0.000 0.000	178.9615 75.92028 104.651 51.01213 -42.25469 -76.32611 -66.24094 -22.11995 51.20279 101.591 82.57623 126.3854 -17.50292 -2.221872 37.52069 114.939 77.51738 93.44944 135.0127 190.7365	265.74 153.76 182.4 128.85 36.344 2.2730 12.35 56.479 129.80 180.19 161.17 204.23 46.058 61.339 101.08 178.91 147.35 157.01 198.57 260.28	72 98 91 44 23 82 19 01 54 24 87 92 12 45
SS	df	MS				96 74
1853805.01 277336.116	19 76		7 Prok 2 R-sc	) > F quared	= 0.000 = 0.86	00 99
2131141.13	95	22433.064			= 60.4	
Coef.	Std. Err.	t	P> t	[95% Cont	f. Interva	 1]
306.242 43.5423 58.76189 -8.372925 -41.19051 -71.99199 -92.75651 -54.68152 -37.30192 22.81612 44.50341 166.0578 18.83281 12.3943 79.66583 199.7558 166.447 166.7794 181.7122 399.5854	33.67075 30.20414 30.20414 30.20414 30.49597 30.49597 30.49597 30.49597 30.49597 30.49597 30.49597 30.49597 30.49597 20.414 24.66157 24.66157 24.66157 24.66157 24.66157 24.66157 24.66157 24.66157 24.66157	9.10 1.44 1.95 -0.28 -1.35 -2.36 -3.04 -1.79 -1.22 0.75 1.46 5.50 0.76 0.50 3.23 8.05 6.14 6.76 7.37 14.81	0.000 0.154 0.055 0.782 0.181 0.021 0.003 0.077 0.225 0.457 0.149 0.0447 0.617 0.002 0.000 0.000 0.000 0.000	239.1809 -16.61445 -1.394865 -68.52968 -101.9285 -132.73 -153.4945 -115.4195 -98.0399 -37.92187 -16.23458 105.9011 -30.28497 -36.72348 30.54805 150.3211 112.4818 117.6616 132.5944 345.8376	373.30 103.6 118.91 51.783 19.547 -11.2 -32.018 6.056 23.436 83.55 105.24 226.21 67.950 61.512 128.78 249.19 220.41 215.89 230.82 453.33	99 86 83 47 54 52 47 07 41 46 59 36 22 71 99
	1203841.51 116107.731 	1203841.51 19 116107.731 76  1319949.24 95  Coef. Std. Err.  222.3524 21.78613 114.8438 19.54311 143.5745 19.54311 89.93562 19.54311 -2.955127 19.73194 -37.02654 19.73194 17.17962 19.73194 17.17962 19.73194 17.17962 19.73194 165.3089 19.54311 14.27797 15.95689 29.55902 15.95689 69.30158 15.95689 146.925 16.05983 112.4347 17.53167 125.2303 15.95689 146.925 16.05983 112.4347 17.53167 125.2303 15.95689 225.5132 17.46103  SS df  1853805.01 19 277336.116 76  2131141.13 95  Coef. Std. Err.  306.242 33.67075 43.5423 30.20414 58.76189 30.20414 58.76189 30.20414 58.76189 30.20414 58.76189 30.20414 58.76189 30.20414 58.76189 30.20414 58.76189 30.20414 58.76189 30.20414 58.76189 30.20414 58.76189 30.20414 58.76189 30.20414 58.76189 30.20414 58.76189 30.20414 58.76189 30.20414 58.76189 30.49597 -71.99199 30.49597 -74.66157 30.49597 -74.66157 12.3943 24.66157 12.3943 24.66157 12.3943 24.66157 199.7558 24.82068 166.7794 24.66157 199.7558 24.82068 166.7794 24.66157 199.7558 24.82068 166.7794 24.66157 181.7122 24.66157	1203841.51	1203841.51	1203841.51	1203841.51

Source	SS	df	MS	Numbe F(19,	er of obs	= 96 = 11.62
Model Residual		76		2 Prob 8 R-squ	> F ıared	= 0.0000 = 0.7439
Total	4932394.43	95	51919.9414		R-squared MSE	= 0.6799 = 128.91
totalpc	Coef.	Std. Err.	t	P> t	[95% Con	f. Interval]
sandyhook monthdv2 monthdv3 monthdv4 monthdv5 monthdv6 monthdv7 monthdv8 monthdv10 monthdv11 monthdv12 yrdv2009 yrdv2010 yrdv2011 yrdv2012 yrdv2013 yrdv2014 yrdv2015cons	289.1362 60.98171 131.013 37.16205 -63.16075 -111.7316 -102.6744 -14.36554 35.24547 110.7545 227.4596 199.9053 13.51706 9.297153 195.0854 382.9757 258.3159 207.7268 277.4406 233.435	71.85384 64.45603 64.45603 65.07881 65.07881 65.07881 65.07881 65.07881 65.07881 65.07881 65.07881 52.62813 52.62813 52.62813 52.62813 52.62813 52.62813 52.62813 52.62813	4.02 0.95 2.03 0.58 -0.97 -1.72 -1.58 -0.22 0.54 1.70 3.50 3.10 0.26 0.18 3.71 7.23 4.47 3.95 5.27 4.05	0.000 0.347 0.046 0.566 0.335 0.090 0.119 0.826 0.590 0.093 0.001 0.003 0.798 0.860 0.000 0.000 0.000 0.000	146.0269 -67.39361 2.63764 -91.21327 -192.7764 -241.3472 -232.2901 -143.9812 -94.37022 -18.86118 97.84395 71.53002 -91.30095 -95.52086 90.26743 277.4815 143.1535 102.9088 172.6225 118.7365	189.357 259.3883 165.5374 66.45494 17.88413 26.94127 115.2501 164.8612 240.3702 357.0753 328.2807 118.3351 114.1152 299.9035 488.47 373.4784 312.5448 382.2586
WV						
Source	SS	df	MS		er of obs 76)	= 96 = 54.17
Source Model Residual	SS 8445519.34 623605.297	19	MS 444501.018 8205.33286	F(19, Prob R-squ	76) > F ıared	= 54.17 = 0.0000 = 0.9312
Model Residual	   8445519.34	19 76	444501.018	F(19, Prob R-squ Adj F	76) > F uared R-squared	= 54.17 = 0.0000
Model Residual	8445519.34 623605.297 9069124.64	19 76	444501.018 8205.33286  95464.4699	F(19, Prob R-squ Adj F	76) > F Jared R-squared MSE	= 54.17 = 0.0000 = 0.9312 = 0.9140
Model Residual Total	8445519.34 623605.297 9069124.64	19 76 95	444501.018 8205.33286  95464.4699	F(19, B Prob G R-squ Adj F Root	76) > F Jared R-squared MSE	= 54.17 = 0.0000 = 0.9312 = 0.9140 = 90.583 

```
Source | SS df M:
                                                df MS
                                                                                                Number of obs
                                                                                                                                               96
                                                                                              F(19, 76)
Prob > F
                                                                                                                                       18.99
      =
                                                                                                                                       0.0000
                                                                                               R-squared
                                                                                                                                       0.8260
                                                                                              Adj R-squared =
                                                                                                                                       0.7825
           Total | 3928962.71 95 41357.5022 Root MSE
                                                                                                                                      94.845
       totalpc | Coef. Std. Err. t P>|t| [95% Conf. Interval]

    sandyhook | 391.9716
    52.86556
    7.41
    0.000

    monthdv2 | 147.2614
    47.42272
    3.11
    0.003

                                                                             7.41 0.000
                                                                                                             286.6808 497.2625
                                                                                                             52.81084
                                                                                                                                    241.7119
                                                                                       0.000
0.151
0.159
       monthdv3
                                197.2692
                                                47.42272
                                                                          4.16
                                                                                                             102.8187
                                                                                                                                    291.7198
                                                                             1.45
                                                                                                         -25.73892
       monthdv4
                                68.71162
                                                    47.42272
                                                                                                                                    163.1622
                                68.08088
       monthdv5
                                                   47.88093
                                                                             1.42
                                                                                                         -27.28224
                                                                                                                                    163.444
        monthdv6
                                13.92911
                                                    47.88093
                                                                           0.29
                                                                                        0.772
                                                                                                           -81.43402
                                                                                                                                    109.2922
        monthdv7
                              -49.80081
                                                    47.88093
                                                                          -1.04
                                                                                         0.302
                                                                                                           -145.1639
                                                                                                                                    45.56232
                                47.4285
       monthdv8
                                                    47.88093
                                                                             0.99
                                                                                         0.325
                                                                                                           -47.93463
                                                                                                                                    142.7916
       monthdv9
                                96.81669
                                                   47.88093
                                                                             2.02
                                                                                         0.047
                                                                                                            1.453565
                                                                                                                                    192.1798
      monthdv10
                                                                                         0.117
                                                                                                           -19.44656
                                75.91657
                                                    47.88093
                                                                             1.59
                                                                                                                                    171.2797
      monthdv11
                                170.3464
                                                    47.88093
                                                                             3.56
                                                                                         0.001
                                                                                                             74.98324
                                                                                                                                    265.7095
      monthdv12
                                456.689
                                                    47.42272
                                                                             9.63
                                                                                        0.000
                                                                                                           362.2385
                                                                                                                                    551.1396
       yrdv2009
                                 13.3141
                                                     38.72049
                                                                           0.34
                                                                                        0.732
                                                                                                           -63.80444
                                                                                                                                    90.43265
                              -47.42012
                                                     38.72049
                                                                          -1.22
                                                                                         0.224
       yrdv2010
                                                                                                           -124.5387
                                                                                                                                    29.69843
                               14.81428
        vrdv2011
                                                     38.72049
                                                                            0.38
                                                                                         0.703
                                                                                                           -62.30426
                                                                                                                                    91.93282
       yrdv2012
                                130.5331
                                                     38.9703
                                                                             3.35
                                                                                         0.001
                                                                                                            52.91698
                                                                                                                                    208.1492
                               127.5828 42.54182
147.7074 38.72049
                                                                                        0.004
0.000
       yrdv2013
                                                                             3.00
                                                                                                            42.85343
                                                                                                                                    212.3122
        yrdv2014
                                                                             3.81
                                                                                                             70.58886
                                                                                                                                    224.8259
       yrdv2015 İ
                                134.6467
                                                                           3.48
                                                                                        0.001
                                                     38.72049
                                                                                                             57.52817
                                                                                                                                    211.7653
             _cons | 643.9753 42.37039
                                                                       15.20 0.000
                                                                                                             559.5873
                                                                                                                                    728.3632
 . clear;
    ******
    * Replication Figure 4 *;
 . /*use deaths-age-state-NOTPUBLIC.dta;
> sort stfips year month;
> sort stfips year month;
> merge m:1 stfips year month using bckcheck-state-public.dta;
> tab _merge;
> drop if _merge ~= 3;
> drop _merge;
> sort stfips year agecat;
> merge stfips year agecat using population-state-age-public;
> tab _merge;
> drop if _merge~=3;
> keep if agecat == "0_14";
> keep if month <= 4 | month == 12;
> replace year = year + 1 if month == 12;
> drop if year < 2008 | year > 2015;
   * drop states with clearly flawed gun sales data (DC, KY, NC, and UT);
   drop if stfips == 11 | stfips == 21 | stfips == 37 | stfips == 49;
> sort stfips year;
>
   gen mortrate = (numdeaths/pop_byage)*100000;
> collapse (mean) mortrate pop_byage, by(stfips year);
   gen largeinc = stfips == 33 | stfips == 2 | stfips == 30 | stfips == 46 |
           stfips == 56 | stfips == 54 | stfips == 40 | stfips == 29 | stfips == 38 | stfips == 16 | stfips == 27 | stfips == 47 | stfips == 53 | stfips == 20 | stfips == 55 | stfips == 42 | stfips == 56 | stfips == 42 | stfips == 57 | stfips == 42 | stfips == 58 | stfips == 42 | stfips == 58 | stfips == 42 | stfips == 58 | stfips == 42 | stfips == 58 | stfips == 42 | stfips == 58 | stfips == 42 | stfips == 58 | stfips == 42 | stfips == 58 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips == 42 | stfips
>
>
                  stfips == 5 | stfips == 31 | stfips == 28 | stfips == 22 | stfips == 41 | stfips == 8 | stfips == 23 | stfips == 17 | stfips == 39 | stfips == 51 | stfips == 50 | stfips == 35 |
>
```

```
stfips == 48 | stfips == 32 | stfips == 45;
> tab largeinc;
> sort stfips year;
> sort largeinc year;
> collapse (mean) mortrate [weight=pop_byage], by(largeinc year);
> gen trend = year - 2007;
> gen trend2 = trend^2;
> regress mortrate trend trend2 if year ~= 2013 & largeinc == 1;
> predict residbig, residual;
> regress mortrate trend trend2 if year ~= 2013 & largeinc == 0;
> predict residsml, residual;
> sort largeinc year;
> list year mortrate residbig largeinc if largeinc == 1, clean;
> list year mortrate residsml largeinc if largeinc == 0, clean;
> clear;*/
. * Replication Table 1, Panel 1 (Descriptive Statistics) *;
. use deaths-age-public.dta;
. keep if year==2013;
(192 observations deleted)
 keep if causedeath=="acc_firearms";
(0 observations deleted)
. format pop_byage %10.0f;
. *Multiply number of deaths by 5 to obtain average number of deaths in a 5-month wind
. bysort agecat: summ numdeaths pop_byage;
> -----
-> agecat = 0_14
   Variable | Obs Mean Std. Dev. Min

    numdeaths |
    12
    5.5
    1.930615
    2
    9

    pop_byage |
    12
    6.11e+07
    0
    6.11e+07
    6.11e+07

-> agecat = 15p
                      0bs
                                Mean
                                              Std. Dev.
   Variable |
                                                              Min
                                                                            Max

    numdeaths |
    12
    36.41667
    9.169696
    25
    52

    pop_byage |
    12
    2.55e+08
    0
    2.55e+08
    2.55e+08

. clear;
********
```

```
*Replicate Table 1, panel 2 *;
. use deaths-age-public.dta:
 keep if year>=2008;
(24 observations deleted)
. gen sandyhook=(year==2012 & month==12)|(year==2013 & month<=4);
. collapse (sum) numdeaths pop_byage, by(year month agecat sandyhook);
. gen mortrate=(numdeaths/pop_byage)*100000;
. foreach x in 0_14 15p {;
2. di "`x'";
  xi: regress mortrate i.month i.year sandyhook if agecat=="`x'";
  4. };
0_14
                  _Imonth_1-12
i.month
                                        (naturally coded; _Imonth_1 omitted)
                  _Iyear_2008-2015
                                        (naturally coded; _Iyear_2008 omitted)
i.year
      Source I
                                                     Number of obs
                                                     F(19, 76)
                                                                      =
                                                                              2.08
                 .000572331
                                    19
                                        .000030123
                                                     Prob' > F
                                                                            0.0133
       Model
                                                     R-squared
                                                                      =
                                       .000014492
   Residual I
                .001101415
                                   76
                                                                            0.3419
                                   -----
                                                     Adj R-squared
                                                                            0.1774
             +----
       Total | .001673746
                                   95 .000017618
                                                     Root MSE
                                                                            .00381
   mortrate | Coef. Std. Err.
                                           t P>|t| [95% Conf. Interval]
                 .0026612 .0019034
   _Imonth_2 |
                                           1.40
                                                  0.166
                                                           -.0011298
                                                                         .0064522
   _Imonth_3
                 .0002085
                             .0019034
                                           0.11
                                                  0.913
                                                            -.0035826
                                                                         .0039995
   _Imonth_4
                                                  0.336
                 .0018438
                             .0019034
                                           0.97
                                                            -.0019472
                                                                          .0056348
                                                             .000585
   _Imonth_5
                 .0044127
                             .0019218
                                           2.30
                                                  0.024
                                                                          .0082403
   _Imonth_6
                 .0009357
                             .0019218
                                           0.49
                                                  0.628
                                                            -.002892
                                                                          .0047633
                                                  0.000
   _Imonth_7
                 .0070736
                                           3.68
                                                             .0032459
                                                                          .0109012
                             .0019218
   _Imonth_8
                 .0015479
                             .0019218
                                           0.81
                                                  0.423
                                                            -.0022798
                                                                          .0053755
    Imonth 9
                 .0011396
                             .0019218
                                           0.59
                                                  0.555
                                                            -.0026881
                                                                          .0049672
  _Imonth_10
                 .0023696
                                                            -.0014581
                             .0019218
                                           1.23
                                                  0.221
                                                                          .0061972
   Imonth_11
Imonth_12
                 .0029835
                             .0019218
                                           1.55
                                                  0.125
                                                            -.0008441
                                                                          .0068112
                 .0040952
                                                                          .0078863
                             .0019034
                                           2.15
                                                  0.035
                                                            .0003042
 _Iyear_2009
_Iyear_2010
_Iyear_2011
_Iyear_2012
                 -.0020713
                             .0015542
                                          -1.33
                                                  0.187
                                                            -.0051666
                                                                          .0010241
                 -.0000409
                             .0015542
                                          -0.03
                                                  0.979
                                                            -.0031363
                                                                          .0030545
                                                  0.500
                 .0010525
                             .0015542
                                           0.68
                                                            -.0020428
                                                                          .0041479
                 -.0018781
                             .0015642
                                          -1.20
                                                  0.234
                                                            -.0049934
                                                                          .0012373
 -.0014179
                             .0017075
                                          -0.83
                                                  0.409
                                                            -.0048187
                                                                           .001983
                 -.001934
                             .0015542
                                          -1.24
                                                  0.217
                                                            -.0050293
                                                                          .0011614
                 -.0020638
                             .0015542
                                          -1.33
                                                            -.0051592
                                                  0.188
                                                                          .0010315
   sandyhook
                 .0058163
                             .0021219
                                           2.74
                                                  0.008
                                                             .0015901
                                                                          .0100424
      _cons |
                 .0060436
                             .0017006
                                           3.55
                                                  0.001
                                                             .0026564
                                                                         .0094307
15p
                  _<u>I</u>month_1-12
                                        (naturally coded; _Imonth_1 omitted)
(naturally coded; _Iyear_2008 omitted)
i.month
                  _Iyear_2008-2015
i.year
                                   df
                                                     Number of obs
                      SS
                                             MS
      Source I
                                                                                96
                                                     F(19, 76)
Prob > F
                                                                              4.78
       Model | .000726756
                                   19
                                         .00003825
                                                                      =
                                                                            0.0000
                                                                      =
   Residual |
                .000608659
                                   76
                                       8.0087e-06
                                                     R-squared
                                                                            0.5442
                                                     Adj R-squared
                                                                           0.4303
       Total | .001335415 95 .000014057
                                                     Root MSE
                                                                            .00283
```

mortrate	Coef.	Std. Err.	t	P> t	[95% Conf.	Interval]
_Imonth_2   _Imonth_3   _Imonth_4   _Imonth_5   _Imonth_6   _Imonth_7   _Imonth_8   _Imonth_10   _Imonth_11   _Imonth_12   _Iyear_2009   _Iyear_2010   _Iyear_2011   _Iyear_2012   _Iyear_2013   _Iyear_2014   _Iyear_2015   _sandyhook   _cons	0017890027852003051900185830030155 .0013215 .00020680020255 .0005149 .0041181 .00270790010333 .0000723001000900234550049936004993600499360041174003076 .0187015	.001415 .001415 .001415 .0014287 .0014287 .0014287 .0014287 .0014287 .0014287 .0014287 .0014553 .0011553 .0011553 .0011553 .0011553 .0011553 .0011553 .0011553	-1.26 -1.97 -2.16 -1.30 -2.11 0.93 0.14 -1.42 0.36 2.88 1.91 -0.89 0.06 -0.87 -2.02 -3.93 -0.81 -3.56 1.95 14.79	0.210 0.053 0.034 0.197 0.038 0.358 0.358 0.160 0.720 0.005 0.059 0.374 0.950 0.389 0.389 0.419 0.001 0.055 0.000	0046072 0056034 00587 0047037 0058609 0015239 0026386 0048709 0023305 0012727 0001103 0033343 0022287 003302 0046614 0075217 0032393 0064184 0000656 0161836	.0010292 .000033 0002337 .0009871 0001701 .0041669 .0030522 .0008199 .0033603 .0069635 .0055261 .0012677 .0023734 .0013001 0024654 .0013627 0018163 .0062176 .0212194

- . collapse (sum) numdeaths pop\_byage, by(year month sandyhook);
- . gen mortrate=(numdeaths/pop\_byage)\*100000;
- . summ mortrate;

Variable		ev. Min	
		14 .0090225	

Source	SS	df	MS	Number of obs F(19, 76)	=	96 5.54
Model Residual		19 76	.000029996 5.4130e-06	Pr̀ob´> F´ R-squared	= =	0.0000 0.5808
,	.000981314	95	.00001033	Adj R-squared Root MSE	=	0.4760 .00233

```
. clear;
  *********
 *Replicate Table 1, panel 3 *;
. use deaths-age-public.dta;
 keep if year>=2008;
(24 observations deleted)
. *Create total population variable that varies by year, but not by age;
. egen pop=sum(pop_byage), by(year month);
. sort year month;
. merge year month using bckcheck-public.dta;
(note: you are using old merge syntax; see [D] merge for new syntax) variables year month do not uniquely identify observations in the master data
. tab _merge;
    _merge | Freq. Percent
             12 5.88
                                         5.88
         3 |
                    192
                              94.12
                                        100.00
                   204
                         100.00
     Total |
. *Calculate background checks per 100 population (which is the same as 1000s of backg
> round check
> s per 100,000);
  gen totalpc=(total/pop)*100;
(12 missing values generated)
. *Create sandyhook instruments;
. gen sandyhook=(year==2012 \& month==12) | (year==2013 \& month<=4);
. *Calculate mortality rate per 100,000;
  gen mortrate=(numdeaths/pop_byage)*100000;
(12 missing values generated)
. foreach x in 0_14 15p {;
2. di "`x'";
  3. xi: ivregress 2sls mortrate i.month i.year (totalpc = sandyhook) if agecat=="`x'"
  4. };
0_14
                                     (naturally coded; _Imonth_1 omitted)
(naturally coded; _Iyear_2007 omitted)
                 _Imonth_1-12
i.month
                  _Iyear_2007-2015
i.year
note: _Iyear_2015 omitted because of collinearity
Instrumental variables (2SLS) regression
                                                 Number of obs
                                                                           96
                                                 Wald chi2(19) =
                                                                       47.69
                                                 Prob > chi2
                                                                 =
                                                                       0.0003
                                                 R-squared
                                                                 =
                                                                       0.3117
                                                 Root MSE
                                                                       .00346
   mortrate | Coef. Std. Err. z P>|z| [95% Conf. Interval]
 3.01 0.003
0.75 0.452
-0.96 0.335
              .0304311 .0101027
.0013429 .0017865
                                                                     .0502319
    totalpc |
                                                        .0106302
   _Imonth<u>'</u>2
                                                       -.0021586
                                                                     .0048445
   _Imonth_3
                          .0018548
               -.0017899
                                                       -.0054252
                                                                     .0018455
  _Imonth_4
                .0025213
                           .0017467
                                        1.44
                                              0.149
                                                       -.0009021
                                                                     .0059447
   _Imonth_5
                .0060207
                           .0018977
                                        3.17
                                               0.002
                                                         .0023013
                                                                       .00974
   _Imonth_6
                .0031712
                           .0019919
                                        1.59
                                              0.111
                                                       -.0007328
                                                                     .0070751
  _Imonth_7
                                              0.000
                .0090473
                           .0019504
                                        4.64
                                                        .0052246
                                                                     .0128701
   _Imonth_8
                .0023132
                                                                     .0058442
                           .0018016
                                        1.28
                                               0.199
                                                        -.0012178
                                              0.268
                .0020062
                                                                     .0055559
   _Imonth_9
                           .0018111
                                        1.11
                                                        -.0015436
  _Imonth_10 |
                                                                     .0048957
               .0014996
                          .0017328
                                        0.87
                                              0.387
                                                       -.0018966
                .0003583
   _Imonth_11
                           .0018432
                                        0.19
                                               0.846
                                                        -.0032543
                                                                     .0039709
                                              0.494
  _Imonth_12 | -.0017836
                            .0026095
                                       -0.68
                                                        -.0068981
                                                                     .0033309
```

```
.0039835
.0014811
 _Iyear_2008 |
                  .0096379
                                 .0028849
                                                  3.34
                                                         0.001
                                                                                      .0152922
                                                                                     .0117037
 _Iyear_2009 |
                   .0065924 .0026078
                                                  2.53
                                                         0.011
0.001
                                                                      .00343
                                                                                     .0134577
                                                  3.30
                                                                       .0037775
                                                                                     .0122002
                                                  3.72
                                                         0.056
                                                  1.91
                                                                    -.0000762
                                                                                     .0063199
                                                         0.008
0.257
                                                  2.66
                                                                                     .0068597
                                                                      .0010385
                                                  1.13
                                                                     -.0012469
                                                                                     .0046658
                                                -2.21 0.027 -.0260107 -.0015731
Instrumented: totalpc
                 _Imonth_2 _Imonth_3 _Imonth_4 _Imonth_5 _Imonth_6 _Imonth_7 _Imonth_8 _Imonth_9 _Imonth_10 _Imonth_11 _Imonth_12 _Iyear_2008 _Iyear_2009 _Iyear_2010 _Iyear_2011 _Iyear_2012 _Iyear_2013 _Iyear_2014 sandyhook
Instruments:
15p
                     _Imonth_1-12 (naturally coded; _Imonth_1 omitted)
_Iyear_2007-2015 (naturally coded; _Iyear_2007 omitted)
i.month
i.year
note: _Iyear_2015 omitted because of collinearity
                                                             Number of obs =
Instrumental variables (2SLS) regression
                                                             Number of ods = 96
Wald chi2(19) = 113.99
Prob > chi2 = 0.0000
R-squared = 0.5417
Root MSF = 00252
                                                             Root MSE
                                                                                        .00252
   mortrate | Coef. Std. Err. z P>|z| [95% Conf. Interval]
  .0006116 .0013131
-.0015672 .0013201
.0000548 .001263
                                                                  -.0019621
-.0041545
                                                -1.19
                                                                                     .0010201
    _Imonth_9
                  -.0015672
                                                          0.235
  _Imonth_10 |
                   .0000548
                                                0.04
                                                         0.965
                                                                    -.0024205
                                                                                     .0025302
                                  .001263
                                .0013434
.001902
.0021027
                                                                     .0000966
  _Imonth_11
                    .0027297
                                                         0.042
                                                                                    .0053628
                                                 2.03
                                                         0.833
0.000
                                                                                     .0033266
   _Imonth_12
                   -.0004012
                                                -0.21
                                                                      -.004129
 .008123
                                                                      .0040018
                                                3.86
                                                                                     .0122443
 _Iyear_2009 |
_Iyear_2010 |
_Iyear_2011 |
_Iyear_2012 |
                                                                     .0028491
                                                                                     .0102999
                               .0019008
                                                3.46
                                                         0.001
                  .0075855 .0018645
.0056933 .0015661
.0033247 .0011893
.0008707 .0010824
.0040145 .0010994
                                                                     .0039311
.0026238
                                                                                      .0112399
                                                  4.07
                                                          0.000
                                                          0.000
                                                  3.64
                                                                                      .0087628
                                                                                     .0056556
                                                  2.80
                                                         0.005
                                                                      .0009937
0.421
0.000
                                                                   -.0012507
                                                                                    .0029922
                                                  0.80
                                                  3.65
                                                                     .0018597
                                                                                     .0061692
      ar_2015 | 0 (omitted)
_cons | .0051853 .0045439
                                                  1.14 0.254 -.0037206
                                                                                     .0140913
Instrumented: totalpc
                 _Imonth_2 _Imonth_3 _Imonth_4 _Imonth_5 _Imonth_6 _Imonth_7 _Imonth_8 _Imonth_9 _Imonth_10 _Imonth_11 _Imonth_12 _Iyear_2008 _Iyear_2009 _Iyear_2010 _Iyear_2011 _Iyear_2012 _Iyear_2013 _Iyear_2014 sandyhook
Instruments:
```

<sup>. \*</sup>Collapse to full population;

<sup>.</sup> collapse (sum) numdeaths pop\_byage, by(year month totalpc sandyhook);

```
. *Calculate mortality rate for full population;
  gen mortrate=(numdeaths/pop_byage)*100000;
(12 missing values generated)
. xi: ivregress 2sls mortrate i.month i.year (totalpc=sandyhook);
                  _Imonth_1-12
i.month
                                        (naturally coded; _Imonth_1 omitted)
                    _Iyear_2007-2015
                                        (naturally coded; _Iyear_2007 omitted)
i.year
note: _Iyear_2015 omitted because of collinearity
                                                     Number of obs
Instrumental variables (2SLS) regression
                                                                                96
                                                     Wald chi2(19)
                                                                     =
                                                                            130.07
                                                     Prob > chi2
                                                                      =
                                                                            0.0000
                                                                      =
                                                     R-squared
                                                                            0.5714
                                                     Root MSE
                                                                            .00209
   mortrate | Coef. Std. Err. z P>|z| [95% Conf. Interval]
  _______
               .018902 .0061045 3.10 0.002 .0069375
-.0017567 .0010795 -1.63 0.104 -.0038725
-.0034507 .0011208 -3.08 0.002 -.0056473
    totalpc |
                                         -1.63 0.104
-3.08 0.002
-1.59 0.112
                                                                          .0003591
   _Imonth_2 |
   _Imonth_3
                                                                          -.001254
   _Imonth_4
                -.0016791 .0010554
                                                           -.0037477
                                                                          .0003894
   _Imonth_5
                 .0003592
                            .0011467
                                          0.31
                                                 0.754
                                                            -.0018882
                                                                          .0026066
   _Imonth_6
                -.0008572
                                          -0.71
                             .0012036
                                                  0.476
                                                            -.0032162
                                                                          .0015018
                 .0036721
                             .0011785
                                                             .0013622
   _Imonth_7
                                           3.12
                                                  0.002
                                                                           .005982
   _Imonth_8
                 .0009477
                             .0010886
                                           0.87
                                                  0.384
                                                            -.0011859
                                                                          .0030813
                             .0010944
                                                  0.425
0.748
   _Imonth_9
                 -.0008725
                                          -0.80
                                                            -.0030174
                                                                          .0012724
   _Imonth_10
                 .0003359
                              .001047
                                           0.32
                                                            -.0017162
                                                                           .002388
  _Imonth_11
                 .0022677
                             .0011137
                                           2.04
                                                  0.042
                                                             .0000848
                                                                          .0044506
                            .0015768
                                                                          .0024223
                -.0006681
                                          -0.42
                                                  0.672
                                                            -.0037585
   _Imonth_12
 _Iyear_2008
_Iyear_2009
                 .0083302
                             .0017432
                                           4.78
                                                   0.000
                                                             .0049136
                                                                          .0117468
                 .0064964
                             .0015758
                                                   0.000
                                                                          .0095848
                                           4.12
                                                             .0034079
 _Iyear_2010
                 .0076877
                             .0015457
                                           4.97
                                                   0.000
                                                             .0046581
                                                                          .0107173
 __Iyear_2011 |
_Iyear_2012 |
_Iyear_2013 |
                             .0012983
                 .0060936
                                           4.69
                                                   0.000
                                                             .0035489
                                                                          .0086382
                   .00325
                             .0009859
                                           3.30
                                                  0.001
                                                             .0013176
                                                                          .0051824
                            .0008973
                 .0014421
                                                  0.108
                                                            -.0003166
                                           1.61
                                                                          .0032008
 _Iyear_2014
_Iyear_2015
                              .0009114
                 .0035632
                                           3.91
                                                  0.000
                                                             .0017769
                                                                          .0053496
                       0 (omitted)
                 .0015191
       _cons |
                              .003767
                                           0.40 0.687
                                                            -.0058641
                                                                          .0089022
Instrumented: totalpc
               _Imonth_2 _Imonth_3 _Imonth_4 _Imonth_5 _Imonth_6 _Imonth_7 _Imonth_8 _Imonth_9 _Imonth_10 _Imonth_11 _Imonth_12 _Iyear_2008 _Iyear_2009 _Iyear_2010 _Iyear_2011 _Iyear_2012 _Iyear_2013 _Iyear_2014 sandyhook
Instruments:
. clear;
  *******************
 *Replicate Table 1, Panel 4
  *The data for these regressions are not publicly available *
. /*use deaths-age-state-NOTPUBLIC.dta;
> keep if year>=2008;
> sort stfips year agecat;
> merge stfips year agecat using population-state-age-public dta;
> tab _merge;
> keep if _merge==3;
> capture drop _merge;
> sort stfips year month;
> merge stfips year month using bckcheck-state-public.dta;
 tab _merge;
> keep if _merge==3;
> *Exclude states with clearly flawed gun sales data (DC, KY NC, and UT);
> drop if stfips==11|stfips==21|stfips==37|stfips==49;
> *Create sandyhook instruments;
> gen sandyhook=(year==2012 & month==12)|(year==2013 & month<=4);</pre>
```

```
> gen shook_obama=sandyhook*pctobama;
> gen stmonth=(stfips*100)+month;
> *Create total population variable that varies by year, but not by age;
> egen pop=sum(pop_byage), by(stfips year month);
> *Calculate background checks per 100 population (which is the same as 1000s of backg
> round check
> s per 100,000);
> gen totalpc=(total/pop)*100;
> *Calculate mortality rate per 100,000;
> gen mortrate=(numdeaths/pop_byage)*100000;
> foreach x in 0_14 15p {;
> xi: ivreg2 mortrate i.month i.stname*i.year i.stname*i.month (totalpc = sandyhook sh
> ook_obama)
> if agecat=="`x'" [weight=pop_byage], cluster(stname);
> *Collapse to full-population;
> collapse (sum) numdeaths, by(stfips stname year month total pop totalpc sandyhook sh
> ook_obama);
> *Calculate mortality rate for full population;
> gen mortrate=(numdeaths/pop)*100000;
> xi: ivreg2 mortrate i.month i.stname*i.year i.stname*i.month (totalpc = sandyhook sh
> ook_obama)
> [weight=pop], cluster(stname);
> clear; */
end of do-file
. exit, clear
```

# Google Trends Analysis

David Liu
March 20, 2018

#### Figure 1

Load the data and store in a data frame.

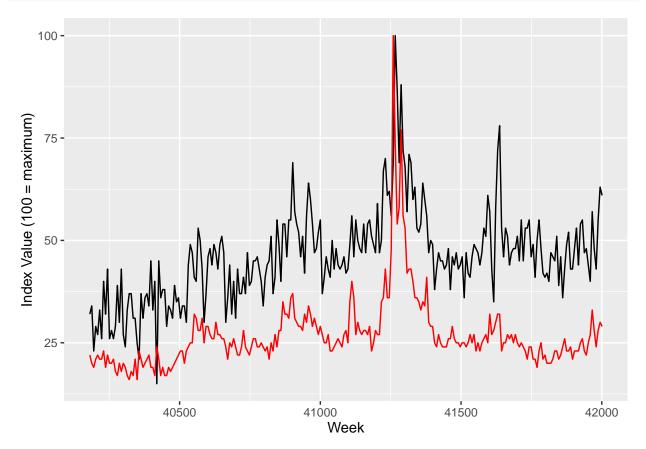
```
load("../data/raw/Google Trends data for Figure 1.RData")
google_trends <- data.frame(x[3:nrow(x),]) # extrude misellaneous header data
colnames(google_trends) <- c("week", "clean", "buy")</pre>
```

Cast vaulues to be numeric from string format

```
google_trends$week <- as.numeric(google_trends$week)
google_trends$clean <- as.numeric(google_trends$clean)
google_trends$buy <- as.numeric(google_trends$buy)</pre>
```

Replicate Figure 1 from the paper:

```
ggplot(data = google_trends) +
  geom_line(aes(x = week, y = clean), color = "black") +
  geom_line(aes(x = week, y = buy), color = "red") +
  xlab("Week") +
  ylab("Index Value (100 = maximum)")
```



```
ggsave("../writing/figures/fig1_generated.PNG")
```

## Saving  $6.5 \times 4.5$  in image

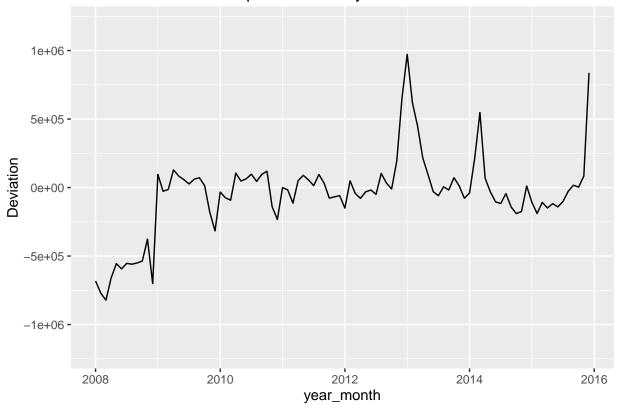
### Figure 2

Figure as-is

```
nat_gun_sales <- read.csv(".../output/figure data/fig2_sales.csv")
nat_gun_sales$year_month <- nat_gun_sales$year + (nat_gun_sales$month - 1)/12.0
nat_gun_sales <- filter(nat_gun_sales, year <= 2015)</pre>
```

```
ggplot() +
  geom_line(data = nat_gun_sales, aes(x = year_month, y = resid)) +
  ylim(c(-1200000, 1200000)) +
  ylab("Deviation") +
  ggtitle("Deviations from Expected Monthly Firearm Sales: Pre-revision")
```

#### Deviations from Expected Monthly Firearm Sales: Pre-revision



```
ggsave("../writing/figures/fig2_pre_revision.PNG")
```

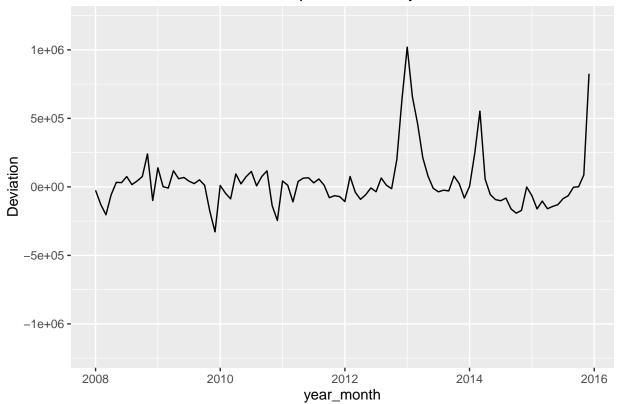
```
## Saving 6.5 \times 4.5 in image
```

Remove 2016 data

```
nat_gun_sales <- read.csv("../output/figure data/fig2_sales_revised.csv")
nat_gun_sales$year_month <- nat_gun_sales$year + (nat_gun_sales$month - 1)/12.0
nat_gun_sales <- filter(nat_gun_sales, year <= 2015)</pre>
```

```
ggplot() +
  geom_line(data = nat_gun_sales, aes(x = year_month, y = resid)) +
  ylim(c(-1200000, 1200000)) +
  ylab("Deviation") +
  ggtitle("Deviations from Expected Monthly Firearm Sales")
```

## Deviations from Expected Monthly Firearm Sales



```
ggsave("../writing/figures/fig2_sales.PNG")
```

```
## Saving 6.5 \times 4.5 in image
```

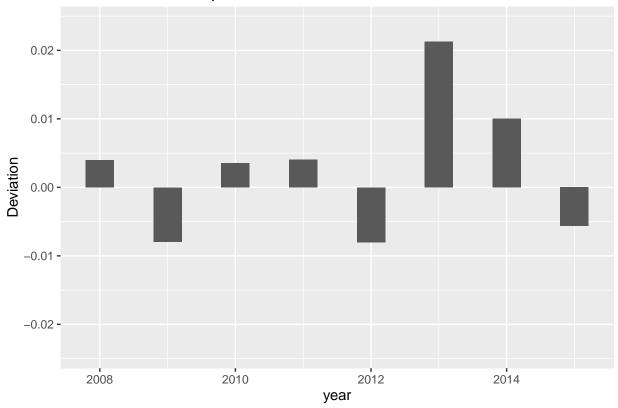
Load the death data

```
nat_death <- read.csv("../output/figure data/fig2_deaths.csv")</pre>
```

```
ggplot(data = nat_death) +
  geom_bar(aes(x = year, weight = resid), width = 0.417) +
  ylim(c(-0.024, 0.024)) +
  ylab("Deviation") +
  ggtitle("Deviations from Expected Accidental Firearm Death Rates for Children")
```

## Warning: Stacking not well defined when ymin != 0

## Deviations from Expected Accidental Firearm Death Rates for Children

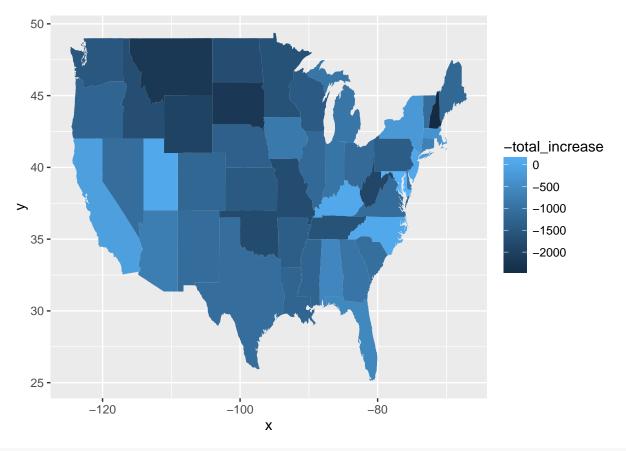


```
ggsave(".../writing/figures/fig2_deaths.PNG")
## Saving 6.5 x 4.5 in image
## Warning: Stacking not well defined when ymin != 0
# set bar width to 5 months
```

#### Figure 3

Setup the dataframe for state level firearm sale increases:

```
states_gun_increase <- read.csv("../output/figure data/fig3.csv")
states_map <- map_data("state")
ggplot(states_gun_increase, aes(map_id = state)) +
    geom_map(aes(fill = -total_increase), map = states_map)+
    expand_limits(x = states_map$long, y = states_map$lat)</pre>
```



ggsave("../writing/figures/fig3\_generated.png")

## Saving 6.5 x 4.5 in image