```stata
1   use
    "H:\chen_do\AQI_2014-2016_dofile&data\0521_data\AQI_Weather_FuelPrices_Cropharvest_spatialP
    M_monsoon_wind.dta"
2   cd H:\chen_do\AQI_2014-2016_dofile&data\0521_data
3
4   sum windspeed maxspeed
5   replace windspeed = windspeed * 10
6   replace maxspeed = maxspeed * 10
7   sum windspeed maxspeed
8
9   drop cys cym
10  gen cym=cityid*1000+(year-2010)*100+month
11
12  gen ymd = mdy(month,day,year)
13  duplicates report cym day
14  duplicates report cityid ymd
15
16  duplicates drop cym day,force
17  save AQI_Weather_FuelPrices_Cropharvest_spatialPM_monsoon_wind_windspeed.dta
18
19  use
    "H:\chen_do\AQI_2014-2016_dofile&data\0521_data\AQI_Weather_FuelPrices_Cropharvest_spatialP
    M_monsoon_wind_windspeed.dta"
20  cd H:\chen_do\AQI_2014-2016_dofile&data\0521_data
21
22  gen corn_harvest= Summer_corn_harvest + Spring_corn_harvest
23  gen rice_harvest= Early_rice_harvest + Middle_rice_harvest + Lata_rice_harvest
24  save AQI_Weather_FuelPrices_Cropharvest_spatialPM_monsoon_wind_windspeed_rice.dta
25
26  gen pro_id=real(substr(string(citycode2010),1,2))
27  tab pro_id
28
29  xtset cityid ymd, daily
30  gen l1concentration_PM25=l.concentration_PM25
31  label var l1concentration_PM25 "Temporally lagged PM25"
32
33  gen pymd=pro_id*100000+(year-2010)*10000+month*100+day
34  xtset cym day
35  tab corn_harvest
36  tab Summer_corn_harvest
37  tab Spring_corn_harvest
38  tab Middle_rice_harvest
39  tab Wheat_harveat
40  tab Early_rice_harvest
41  tab Lata_rice_harvest
42  gen yd_rice=0
43  replace yd_rice=1 if Early_rice_harvest==1
44  replace yd_rice=1 if Middle_rice_harvest ==1
45  replace yd_rice=1 if Lata_rice_harvest ==1
46  gen yd_corn=0
47  replace yd_corn=1 if Summer_corn_harvest ==1
48  replace yd_corn=1 if Spring_corn_harvest ==1
49  gen yd_wheat=0
50  replace yd_wheat=1 if Wheat_harveat ==1
51  gen yd_any=0
52  replace yd_any=1 if Early_rice_harvest==1
53  replace yd_any=1 if Middle_rice_harvest ==1
54  replace yd_any=1 if Lata_rice_harvest ==1
55  replace yd_any=1 if Summer_corn_harvest ==1
56  replace yd_any=1 if Spring_corn_harvest ==1
57  replace yd_any=1 if Wheat_harveat ==1
58  save AQI_Weather_FuelPrices_Cropharvest_spatialPM_monsoon_wind_windspeed_rice_yd.dta
59
60  //广东的油价和贵州的油价有问题
61  replace price_gasoline=7420 if price_gasoline==742
62  replace price_gasoline=7065 if price_gasoline==6065
63  save AQI_Weather_FuelPrices_Cropharvest_spatialPM_monsoon_wind_windspeed_rice_yd_oil.dta
64
65  //替换周末1-7,7和1为周六和周日
66  use
    "H:\chen_do\AQI_2014-2016_dofile&data\0521_data\AQI_Weather_FuelPrices_Cropharvest_spatialP
    M_monsoon_wind_windspeed_rice_yd_oil.dta"
67  cd H:\chen_do\AQI_2014-2016_dofile&data\0521_data
68  replace weekend=1 if weekday==7
```

```stata
 69    replace weekend=1 if weekday==1
 70    save
       AQI_Weather_FuelPrices_Cropharvest_spatialPM_monsoon_wind_windspeed_rice_yd_oil_weekend.dta
 71

 72
 73    //baseline
 74    use
       "D:\chen_do\AQI_Weather_FuelPrices_Cropharvest_spatialPM_monsoon_wind_windspeed_rice_yd_oil
       _weekend.dta"
 75    cd D:\chen_do
 76    log using baseline.log
 77

 78
 79    xtset cym day
 80

 81
 82    xtivreg2 concentration_PM25 l1concentration_PM25 precipitation sunshine maxtemp mintemp
       windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend if
       wintermonsoon==1, fe cluster(cityid pymd)
 83    estimates store model1
 84    xtivreg2 concentration_PM25 l1concentration_PM25 s1 precipitation sunshine maxtemp mintemp
        windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend if
       wintermonsoon==1, fe cluster(cityid pymd)
 85    estimates store model2
 86    xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if wintermonsoon==1, fe cluster(cityid pymd)
 87    estimates store model3
 88    outreg2 [model1 model2 model3] using "results\baseline_Table3_Wintermonsoon", see replace
       word dec(3)
 89
 90    estpost summarize concentration_PM10 concentration_PM25 precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if e(sample)==1, listwise
 91    esttab, cells("mean sd min max") nomtitle nonumber
 92
 93    xtreg precipitation i.year if wintermonsoon==1, fe
 94    predict precipitation_r, e
 95    xtreg sunshine i.year if wintermonsoon==1, fe
 96    predict sunshine_r, e
 97    xtreg maxtemp i.year if wintermonsoon==1, fe
 98    predict maxtemp_r, e
 99    xtreg mintemp i.year if wintermonsoon==1, fe
100    predict mintemp_r, e
101    xtreg windspeed i.year if wintermonsoon==1, fe
102    predict windspeed_r, e
103    xtreg pressure i.year if wintermonsoon==1, fe
104    predict pressure_r, e
105    xtreg avhumid i.year if wintermonsoon==1, fe
106    predict avhumid_r, e
107    pwcorr precipitation_r sunshine_r maxtemp_r mintemp_r windspeed_r pressure_r avhumid_r, sig
108    drop precipitation_r sunshine_r maxtemp_r mintemp_r windspeed_r pressure_r avhumid_r
109

110
111    xtivreg2 concentration_PM25 l1concentration_PM25 precipitation sunshine maxtemp mintemp
       windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend if
       summermonsoon==1, fe cluster(cityid pymd)
112    estimates store model4
113    xtivreg2 concentration_PM25 l1concentration_PM25 s1 precipitation sunshine maxtemp mintemp
        windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend if
       summermonsoon==1, fe cluster(cityid pymd)
114    estimates store model5
115    xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if summermonsoon==1, fe cluster(cityid pymd)
116    estimates store model6
117    outreg2 [model4 model5 model6] using "results\baseline_Table3_Summermonsoon", see replace
       word dec(3)
118    estpost summarize concentration_PM10 concentration_PM25 precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if e(sample)==1, listwise
119    esttab, cells("mean sd min max") nomtitle nonumber
120
121    xtreg precipitation i.year if summermonsoon==1, fe
```

```stata
122    predict precipitation_r, e
123    xtreg sunshine i.year if summermonsoon==1, fe
124    predict sunshine_r, e
125    xtreg maxtemp i.year if summermonsoon==1, fe
126    predict maxtemp_r, e
127    xtreg mintemp i.year if summermonsoon==1, fe
128    predict mintemp_r, e
129    xtreg windspeed i.year if summermonsoon==1, fe
130    predict windspeed_r, e
131    xtreg pressure i.year if summermonsoon==1, fe
132    predict pressure_r, e
133    xtreg avhumid i.year if summermonsoon==1, fe
134    predict avhumid_r, e
135    pwcorr precipitation_r sunshine_r maxtemp_r mintemp_r windspeed_r pressure_r avhumid_r, sig
136    drop precipitation_r sunshine_r maxtemp_r mintemp_r windspeed_r pressure_r avhumid_r
137
138    log close
139
140    //提前准备component_wintermosoon和component_summermosoon.dta
141    use "D:\chen_do\data\component_wintermosoon.dta"
142    drop M_total- cityid
143    save "D:\chen_do\data\component_wintermosoon.dta", replace
144
145    use "D:\chen_do\data\component_summermosoon.dta"
146    drop M_total- cityid
147    save "D:\chen_do\data\component_summermosoon.dta", replace
148
149    //component winter&summer
150    ************************************************************************
151    *the following code generate city-specific contribution in wintermonsoon
152    *in the component.dta  gen (M_slag+M_stlag)/M_total is the percentage contributions of PM
       from upwind cities
153    ************************************************************************
154    *specify the control vars
155    loc control3= "precipitation sunshine maxtemp mintemp windspeed pressure avhumid
       price_gasoline yd_rice yd_corn yd_wheat holiday weekend"
156    *load data
157    use
       "D:\chen_do\AQI_Weather_FuelPrices_Cropharvest_spatialPM_monsoon_wind_windspeed_rice_yd_oil
       _weekend.dta",clear
158    cd H:\chen_do
159    keep if wintermonsoon==1
160    drop if cityid==144
161
162    *baseline regression for wintermonson, i just keep the observations used in the
       regression to save time
163    xtreg concentration_PM25 l1concentration_PM25 s1 sl_lag `control3', fe
164
165    *xtreg concentration_PM10 l1concentration_PM10 `control3' if summermonsoon==1, fe /*use
       this line for summermonsoon, we will get another dataset*/
166    keep if e(sample)==1
167    preserve
168
169    levelsof cityid,local(levels)    /*list the name of all cities*/
170
171    foreach l of local levels {
172
173    restore, preserve
174
175    keep if cityid==`l'
176
177    dis "the city is "`l'
178    xtreg concentration_PM25 l1concentration_PM25 s1 sl_lag `control3', fe  /*we don't need
       to add cluster, because we std error doesn't affect predicted value*/
179    predict TotalEffect, xb
180
181    gen TlagEffect=_b[l1concentration_PM25]*l1concentration_PM25/TotalEffect if _b[
       l1concentration_PM25]>=0 /*predict y_hat, i.e. total effect*/
182    replace TlagEffect=0 if _b[l1concentration_PM25]<0  /*replace y_hat as zero if the
       coefficient is insignificant*/
183
184    gen SlagEffect=_b[s1]*s1/TotalEffect if _b[s1]>=0  /*predict the part explained by
       spatial lag*/
185    replace SlagEffect=0 if _b[s1]<0
```

```stata
186
187    gen STlagEffect=_b[sl_lag]*sl_lag/TotalEffect if _b[sl_lag]>=0 /*predict the part
       explained by spatial and temporal lag*/
188    replace STlagEffect=0 if _b[sl_lag]<0
189    gen N=e(N)
190
191    collapse (mean) M_total=TotalEffect M_tlag=TlagEffect M_slag=SlagEffect M_stlag=
       STlagEffect N  /*average predicted value for each city*/
192    keep if _n==1
193    gen cityid=`l'
194    keep cityid M_* N
195    append using  data\component_wintermosoon
196    sort cityid
197    save data\component_wintermosoon,replace
198    }
199    restore
200
201    **********************************************************************
202    *the following code generate city-specific contribution in summermonsoon
203    *in the component.dta  gen (M_slag+M_stlag)/M_total is the percentage contributions of PM
       from upwind cities
204    **********************************************************************
205    *specify the control vars
206    loc control3= "precipitation sunshine maxtemp mintemp windspeed pressure avhumid
       price_gasoline yd_rice yd_corn yd_wheat holiday weekend"
207    *load data
208    use
       "D:\chen_do\AQI_Weather_FuelPrices_Cropharvest_spatialPM_monsoon_wind_windspeed_rice_yd_oil
       _weekend.dta",clear
209    cd D:\chen_do
210    keep if summermonsoon==1
211    drop if cityid==144
212
213    *baseline regression for wintermonson, i just keep the observations used in the
       regression to save time
214    xtreg concentration_PM25 l1concentration_PM25 s1 sl_lag `control3', fe
215
216    *xtreg concentration_PM10 l1concentration_PM10 `control3' if summermonsoon==1, fe /*use
       this line for summermonsoon, we will get another dataset*/
217    keep if e(sample)==1
218    preserve
219
220    levelsof cityid,local(levels)    /*list the name of all cities*/
221
222    foreach l of local levels {
223
224    restore, preserve
225
226    keep if cityid==`l'
227
228    dis "the city is "`l'
229    xtreg concentration_PM25 l1concentration_PM25 s1 sl_lag `control3', fe  /*we don't need
       to add cluster, because we std error doesn't affect predicted value*/
230    predict TotalEffect, xb
231
232    gen TlagEffect=_b[l1concentration_PM25]*l1concentration_PM25/TotalEffect if _b[
       l1concentration_PM25]>=0 /*predict y_hat, i.e. total effect*/
233    replace TlagEffect=0 if _b[l1concentration_PM25]<0  /*replace y_hat as zero if the
       coefficient is insignificant*/
234
235    gen SlagEffect=_b[s1]*s1/TotalEffect if _b[s1]>=0  /*predict the part explained by
       spatial lag*/
236    replace SlagEffect=0 if _b[s1]<0
237
238    gen STlagEffect=_b[sl_lag]*sl_lag/TotalEffect if _b[sl_lag]>=0 /*predict the part
       explained by spatial and temporal lag*/
239    replace STlagEffect=0 if _b[sl_lag]<0
240    gen N=e(N)
241
242    collapse (mean) M_total=TotalEffect M_tlag=TlagEffect M_slag=SlagEffect M_stlag=
       STlagEffect N  /*average predicted value for each city*/
243    keep if _n==1
244    gen cityid=`l'
245    keep cityid M_* N
```

```
246    append using  data\component_summermosoon
247    sort cityid
248    save data\component_summermosoon,replace
249    }
250    restore
251
252
253    use "D:\chen_do\data\component_summermosoon.dta",clear
254    cd D:\chen_do\data
255    replace M_slag=0 if M_slag<0
256    replace M_stlag=0 if M_stlag<0
257    gen share=(M_slag+M_stlag)*100
258    sum share
259    drop if cityid==.
260    merge 1:1 cityid using cityhan_cityid.dta
261    drop _merge
262    save component_summermosoon_cityhan.dta
263
264    use "D:\chen_do\data\component_wintermosoon.dta",clear
265    cd D:\chen_do\data
266    replace M_slag=0 if M_slag<0
267    replace M_stlag=0 if M_stlag<0
268    gen share=(M_slag+M_stlag)*100
269    sum share
270    drop if cityid==.
271    merge 1:1 cityid using cityhan_cityid.dta
272    drop _merge
273    save component_wintermosoon_cityhan.dta
274
275    //生成city_plain
276    use "H:\chen_do\AQI_2014-2016_dofile&data\0521_data\14-16_city_province_name.dta"
277    cd H:\chen_do\AQI_2014-2016_dofile&data\0521_data
278    gen plain=0
279    replace plain=1 if provincehan=="黑龙江"
280    replace plain=1 if provincehan=="吉林"
281    replace plain=1 if provincehan=="辽宁"
282    replace plain=1 if provincehan=="北京"
283    replace plain=1 if provincehan=="天津"
284    replace plain=1 if provincehan=="河北"
285    replace plain=1 if provincehan=="山东"
286    replace plain=1 if provincehan=="河南"
287    replace plain=1 if provincehan=="安徽"
288    replace plain=1 if provincehan=="江苏"//江苏属于两个平原
289    replace plain=1 if provincehan=="湖北"
290    replace plain=1 if provincehan=="湖南"
291    replace plain=1 if provincehan=="江西"
292    replace plain=1 if provincehan=="安徽"
293    replace plain=1 if provincehan=="浙江"
294    replace plain=1 if provincehan=="上海"
295    replace plain=1 if cityhan=="西安"
296    replace plain=1 if cityhan=="临潼"
297    replace plain=1 if cityhan=="长安"
298    replace plain=1 if cityhan=="咸阳"
299    replace plain=1 if cityhan=="三原"
300    replace plain=1 if cityhan=="渭南"
301    replace plain=1 if cityhan=="铜川"
302    replace plain=1 if cityhan=="杨陵"
303    replace plain=1 if cityhan=="宝鸡"
304    replace plain=1 if cityhan=="彬县"
305    replace plain=1 if cityhan=="黄陵"
306    replace plain=1 if cityhan=="韩城"
307    replace plain=1 if cityhan=="华阴"
308    replace plain=1 if cityhan=="商洛"
309    save city_plain.dta
310
311    //计算每个城市的平均PM2.5
312
313    use
       "H:\chen_do\AQI_2014-2016_dofile&data\0521_data\corn\AQI_Weather_FuelPrices_Cropharvest_spa
       tialPM_monsoon_wind_windspeed_rice_yd_oil.dta"
314    cd H:\chen_do\AQI_2014-2016_dofile&data\0521_data\corn
315    gen winter_concentration_PM25= concentration_PM25 if wintermonsoon ==1
316    gen summer_concentration_PM25= concentration_PM25 if summermonsoon ==1
317    collapse (mean) m_winter_concentration_PM25=winter_concentration_PM25
```

```stata
318    m_summer_concentration_PM25=summer_concentration_PM25, by(cityhan)
       save winter&sunmmer_concentration_PM25.dta
319
320    //Fig C3 2&3&4
321    use
       "H:\chen_do\AQI_2014-2016_dofile&data\0521_data\AQI_Weather_FuelPrices_Cropharvest_spatialP
       M_monsoon_wind_windspeed_rice_yd_oil_weekend.dta",clear
322    cd H:\chen_do\AQI_2014-2016_dofile&data\0521_data
323    log using sensitivity.log
324    *FE regression
325    xtset cym day
326    xtivreg2 concentration_PM25 l1concentration_PM25 s2 s2_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if wintermonsoon==1, fe cluster(cityid pymd)
327    estimates store Model_spatial2_Winter
328    lincom  s2+s2_lag
329    xtivreg2 concentration_PM25 l1concentration_PM25 s3 s3_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if wintermonsoon==1, fe cluster(cityid pymd)
330    estimates store Model_spatial3_Winter
331    lincom  s3+s3_lag
332    xtivreg2 concentration_PM25 l1concentration_PM25 s4 s4_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if wintermonsoon==1, fe cluster(cityid pymd)
333    estimates store Model_spatial4_Winter
334    lincom  s4+s4_lag
335    xtivreg2 concentration_PM25 l1concentration_PM25 s2 s2_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if summermonsoon==1, fe cluster(cityid pymd)
336    estimates store Model_spatial2_Summer
337    lincom  s2+s2_lag
338    xtivreg2 concentration_PM25 l1concentration_PM25 s3 s3_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if summermonsoon==1, fe cluster(cityid pymd)
339    estimates store Model_spatial3_Summer
340    lincom  s3+s3_lag
341    xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if summermonsoon==1, fe cluster(cityid pymd)
342    estimates store Model_spatial4_Summer
343    drop _est_Model_spatial4_Summer
344    xtivreg2 concentration_PM25 l1concentration_PM25 s4 s4_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if summermonsoon==1, fe cluster(cityid pymd)
345    estimates store Model_spatial4_Summer
346    lincom  s4+s4_lag
347    outreg2 [Model_spatial2_Winter Model_spatial3_Winter Model_spatial4_Winter
       Model_spatial2_Summer Model_spatial3_Summer Model_spatial4_Summer] using
       "results\sensitivity_Spatial", see replace word dec(3)
348
349    //Fig C3 5
350    **Scenario (4): Cluster by city AND by region-year-month-day
351    gen rymd=region*100000+(year-2010)*10000+month*100+day
352    xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if wintermonsoon==1, fe cluster(cityid rymd)
353    estimates store RegionFE_Winter
354    lincom  s1+sl_lag
355    xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if summermonsoon==1, fe cluster(cityid rymd)
356    estimates store RegionFE_Summer
357    lincom  s1+sl_lag
358
359    //Fig C3 8
360    **Scenario (5): further dropping samples
361    xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if northwind==1 & wintermonsoon==1, fe cluster(cityid pymd)
362    estimates store CleanSample_Winter
363    lincom  s1+sl_lag
364    xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if souththwind==1 & summermonsoon==1, fe cluster(cityid pymd)
```

```stata
365    estimates store CleanSample_Summer
366    lincom  s1+sl_lag
367
368    //Fig C3 7
369    **Scenario (6): add spatial PM distance only
370    xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag PM_distance precipitation
       sunshine maxtemp mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn
       yd_wheat holiday weekend if wintermonsoon==1, fe cluster(cityid pymd)
371    estimates store PMdistanceonly_Winter
372    lincom  s1+sl_lag
373    xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag PM_distance precipitation
       sunshine maxtemp mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn
       yd_wheat holiday weekend if summermonsoon==1, fe cluster(cityid pymd)
374    estimates store PMdistanceonly_Summer
375    lincom  s1+sl_lag
376    outreg2 [RegionFE_Winter CleanSample_Winter PMdistanceonly_Winter  RegionFE_Summer
       CleanSample_Summer PMdistanceonly_Summer] using "results\sensitivity_Scenarios4-6", see
       replace word dec(3)
377
378    //Fig C3 6
379    **Scenario (7): city-year-season FE + month FE
380    gen cys=cityid*100+(year-2010)*10+season
381    gen smd=season*10000+month*100+day
382    gen md=month*100+day
383    xtset cys md
384    xi: xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag precipitation sunshine
       maxtemp mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday
        weekend i.month if summermonsoon==1, fe cluster(cityid pymd)
385    estimates store MonthFE_Summer
386    lincom  s1+sl_lag
387    xi: xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag precipitation sunshine
       maxtemp mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday
        weekend i.month if wintermonsoon==1, fe cluster(cityid pymd)
388    estimates store MonthFE_Winter
389    lincom  s1+sl_lag
390    outreg2 [MonthFE_Winter MonthFE_Summer] using "results\sensitivity_Scenario7", see replace
        word dec(3)
391
392    //Fig C3 9&10
393    sort cityhan
394    merge cityhan using "city_plain_cityhan.dta"
395    xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if wintermonsoon==1 & plain==1, fe cluster(cityid pymd)
396    tab _merge
397    drop if _merge==2
398    xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if wintermonsoon==1 & plain==1, fe cluster(cityid pymd)
399    estimates store plain_winter
400    lincom  s1+sl_lag
401    xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if summermonsoon==1 & plain==1, fe cluster(cityid pymd)
402    estimates store plain_summer
403    lincom  s1+sl_lag
404    xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if wintermonsoon==1 & plain==0, fe cluster(cit pymd)
405    estimates store non_plain_winter
406    lincom  s1+sl_lag
407    xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag precipitation sunshine maxtemp
       mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
        if summermonsoon==1 & plain==0, fe cluster(cit pymd)
408    estimates store non_plain_summer
409    lincom  s1+sl_lag
410    outreg2 [plain_winter plain_summer non_plain_winter non_plain_summer] using
       "results\sensitivity_plains", see replace word dec(3)
411    save
       AQI_Weather_FuelPrices_Cropharvest_spatialPM_monsoon_wind_windspeed_rice_yd_oil_sensitivity
       .dta
412
413    //Fig C3 1
414    xtset cym day
```

```
415   xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag precipitation sunshine maxtemp
      mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
       if wintermonsoon==1, fe cluster(cityid pymd)
416   estimates store model3
417   lincom  s1+sl_lag
418   xtivreg2 concentration_PM25 l1concentration_PM25 s1 sl_lag precipitation sunshine maxtemp
      mintemp windspeed pressure avhumid price_gasoline yd_rice yd_corn yd_wheat holiday weekend
       if summermonsoon==1, fe cluster(cityid pymd)
419   estimates store model6
420   lincom  s1+sl_lag
421   log close
422
```