READ-ME file

Agricultural Fires and Health at Birth

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Abstract

This file describes data sets and program files for replication of results displayed in Tables and Figures of the main text of the article.

Note:

All analyses on the article utilize Stata-SE 13.1. Exception is OA_FigureA1 on the online appendix which requires QGIS software.

Main Text Figures

Element	Do-file	Input data	Output
Figure 1	T_Figure1.do	rolling_fires_SPstate.dta calendarmonth_fires_SPstate.dta	T_Figure1_fires_PanelA.gph T_Figure1_fires_PanelB.gph

Main Text Tables

Element	Do-file	Input data	Output
Table 1	T_Table1.do	fires_sugarproduction_yearly.dta fires_jobsflows_monthly.dta	Table1_productionjobs_vs_fires.out
Table 2	T_Table2.do	fires_pollution.dta requires our own “wildareg.ado”	Table2_pollution_fires.out Table2_pollution_fires.log
Table 3	T_Table3.do	fires_birthoutcomes.dta requires our own “wildareg.ado”	Table3_birthoutcomes13locales_`depvar'.out Table3_birthoutcomes13locales_`depvar'.log
Table 4	T_Table4.do	fires_birthoutcomes_wfetaldeath.dta requires our own “wildareg.ado”	Table4_birthoutcomes13locales_`depvar'.out Table4_birthoutcomes13locales_`depvar'.log
Table 5	T_Table5.do	fires_birthoutcomes.dta requires our own “wildareg.ado”	Table5_birthoutcomes13locales_`depvar'_robustness.out Table5_birthoutcomes13locales_`depvar'_robustness.log Table5_birthoutcomes13locales_`depvar'_falsification1.out Table5_birthoutcomes13locales_`depvar'_falsification1.log Table5_birthoutcomes13locales_`depvar'_falsification2.out Table5_birthoutcomes13locales_`depvar'_falsification2.log Table5_birthoutcomes13locales_`depvar'_falsification3.out Table5_birthoutcomes13locales_`depvar'_falsification3.log

Codebook/Dictionary

1. **rolling_fires_SPstate.dta**

```
Contains data from ../RESTAT_data/rolling_fires_SPstate.dta
  obs:         3,442
 vars:             9
 size:        79,166
-------------------------------------------------------------------------------------------------------
              storage   display    value
variable name   type    format     label      variable label
-------------------------------------------------------------------------------------------------------
date            int     %td                   date
nr_risks        float   %9.0g                 total number risk-adjusted fires in that date, state of SP
nr_fires        int     %9.0g                 total number fires in that date, state of SP
sum_nr_risks    float   %9.0g                 total number risk-adjusted fires, in state past 14 days
yrsum_nr_risks  float   %9.0g                 total number risk-adjusted fires, in state past 365 days
sum_nr_fires    int     %9.0g                 total number fires, in state past 14 days
yrsum_nr_fires  int     %9.0g                 total number fires, in state past 365 days
year            int     %9.0g                 year (yyyy)
month           byte    %9.0g                 calendar month (mm)

-------------------------------------------------------------------------------------------------------
```

2. calendarmonth_fires_SPstate.dta

Contains data from ../RESTAT_data/calendarmonth_fires_SPstate.dta

```
  obs:            12
 vars:             4
 size:           156
```

variable name	storage type	display format	value label	variable label
month	byte	%9.0g		month
mean_nr_risks	float	%9.0g		average monthly number risk-adjusted fires, in state for calendar month
mean_nr_fires	float	%9.0g		average monthly number fires, in state for calendar month
mean_milled	float	%9.0g		average monthly milled tons of sugarcane, in state for calendar month

3. **fires_sugarproduction_yearly.dta**

```
Contains data from ../RESTAT_data/fires_sugarproduction_yearly.dta
  obs:         7,095
 vars:            12
 size:       141,900
-------------------------------------------------------------------------------------------------------
              storage   display    value
variable name   type    format     label      variable label
-------------------------------------------------------------------------------------------------------
year            int     %9.0g                 year (yyyy)
sum_risks       float   %9.0g                 number of risks in municipality accross all sats (area adjusted)
gdp_pc          float   %9.0g                 ln gdp per capita
Ish_harvested   byte    %9.0g                 has harvested sugarcane in year
sh_harvested1   byte    %9.0g                 (share of munic. area corresponding to harvested sugarcane<=.05)
sh_harvested2   byte    %9.0g                 (0.05< share of munic. area corresponding to harvested sugarcane <=.15)
sh_harvested3   byte    %9.0g                 (0.15< share of munic. area corresponding to harvested sugarcane <=.25)
sh_harvested4   byte    %9.0g                 (0.25< share of munic. area corresponding to harvested sugarcane <=.35)
sh_harvested5   byte    %9.0g                 (0.35< share of munic. area corresponding to harvested sugarcane <=.50)
sh_harvested6   byte    %9.0g                 (0.5< share of munic. area corresponding to harvested sugarcane <=.75)
sh_harvested7   byte    %9.0g                 (0.75< share of munic. area corresponding to harvested sugarcane <=1)
fe_munic        int     %9.0g                 municipality id
-------------------------------------------------------------------------------------------------------
```

4. fires_jobsflows_monthly.dta

```
Contains data from ../RESTAT_data/fires_jobsflows_monthly.dta
  obs:        46,440
 vars:             7                          26 Oct 2018 08:20
 size:     1,114,560
-------------------------------------------------------------------------------------------------
              storage   display    value
variable name   type    format     label      variable label
-------------------------------------------------------------------------------------------------
yearmonth       int     %tm                   year-month running variable
fe_munic        int     %9.0g                 municipality id
entry           float   %9.0g                 hired individuals in month - all sectors, per 2010 pop
exit            float   %9.0g                 job terminations in month - all sectors, per 2010 pop
mean_adm_wage   float   %9.0g                 average wage - hired personnel, $1,000 per 2010 pop
mean_exit_wage  float   %9.0g                 average wage - terminated personnel, $1,000 per 2010 pop
dnr_risks_norm  float   %9.0g                 month change in risk-adjusted fires' count (per 100km_sq)
-------------------------------------------------------------------------------------------------
```

5. fires_pollution.dta

Contains data from ../RESTAT_data/fires_pollution.dta

obs: 28,379

vars: 884 29 Oct 2018 09:24

size: 28,946,580

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variable name	variable label
CODMUNIC_6D	IBGE municipality code
station_id	CETESB station code
date_BR	date
wpop	births in week-location, weights for regression
PM10_dayavg_week0	PM10 weekly average of readings (microgram/cubic meter)
RH_dayavg_week0	Rel Humidity weekly average of readings (%)
TEMP_dayavg_week0	Temperature weekly average of readings (Celsius)
NOx_dayavg_week0	Nitro-Oxides weekly average of readings (ppb)
O3_dayavg_week0	Ozone weekly average of readings (microgram/cubic meter)
NNE_wind_week0	share of hours wind originating from NNE octant
ENE_wind_week0	share of hours wind originating from ENE octant
ESE_wind_week0	share of hours wind originating from NSE octant
SSE_wind_week0	share of hours wind originating from SSE octant
SSW_wind_week0	share of hours wind originating from SSW octant
WSW_wind_week0	share of hours wind originating from WSW octant
WNW_wind_week0	share of hours wind originating from WNW octant

NNW_wind_week0	share of hours wind originating from NNW octant
nowindmeas_week0	share of hours no wind direction or calm
nonprvwinds_week 0	share of days without prevailing wind
RHTEMP_dayavg_week0	interaction RH and TEMP, centered at mean
year	year
woy	week-of-year
fe_yearmunic	year-municipality id
fe_weekmunic	week of year-municipality id
nr_fires5_week0	number of fires detected within city limits (5km radius)
nr_risks50_week0	count of probability-weighted fires within 5-50km of station
pv_nr_risks50_week0	count of probability-weighted fires within 5-50km of station, from prevailing octant
opv_nr_risks5_week0	count of probability-weighted fires within 5-50km of station, from octant opposing prevailing octant
npv_nr_risks50_week0	count of probability-weighted fires within 5-50km of station, from other non-prevailing octants
res_nr_risks50_week0	count of probability-weighted fires within 5-50km of station, from all non-prevailing octants
znr_risks50_week0	z-scored count of probability-weighted fires within 5-50km of station
zres_nr_risks50_week0	z-scored count of probability-weighted fires within 5-50km of station, from all non-prevailing octants
zpv_nr_risks50_week0	z-scored count of probability-weighted fires within 5-50km of station, from prevailing octant
zopv_nr_risks50_week0	z-scored count of probability-weighted fires within 5-50km of station, from octant opposing prevailing octant
znpv_nr_risks50_week0	z-scored count of probability-weighted fires within 5-50km of station, from other non-prevailing octants
zpvst_nr_risks50_week0	z-scored count of probability-weighted fires within 5-50km of station, from stricter prevailing octant
zpv_nr30d_risks50_week0	z-scored count of probability-weighted fires within 5-50km of station, from 30d prevailing section
zpv_nr90d_risks50_week0	z-scored count of probability-weighted fires within 5-50km of station, from prevailing quadrant
zpv_nr_risks40_week0	z-scored count of probability-weighted fires within 5-40km of station, from prevailing octant
znr_risks40_week0	z-scored count of probability-weighted fires within 5-40km of station
zpv_nr_risks30_week0	z-scored count of probability-weighted fires within 5-30km of station, from prevailing octant
znr_risks30_week0	z-scored count of probability-weighted fires within 5-30km of station

zpv_nr_risks20_week0	z-scored count of probability-weighted fires within 5-20km of station, from prevailing octant
znr_risks20_week0	z-scored count of probability-weighted fires within 5-20km of station
zpv_nr_risks10_week0	z-scored count of probability-weighted fires within 5-10km of station, from prevailing octant
znr_risks10_week0	z-scored count of probability-weighted fires within 5-10km of station
WKSfe_weekm_1 to WKSfe_weekm_676	week of year * municipality indicators
STYfe_yearm_1 to STYfe_yearm_78	year * municipality indicators
YRyear_2009 to YRyear_2014	year indicators
WKwoy_1 to WKwoy_52	week of year indicators
TSTAstation_1 to TSTAstation_13	Station/Municipality indicators
TSTAstation_1_trend to TSTAstation_13_trend	Linear year trend per station/municipality

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6. fires_birthoutcomes.dta

Contains data from ../RESTAT_data/fires_birthoutcomes.dta

obs: 26,399

vars: 831 7 Nov 2018 09:08

size: 86,456,725

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variable name	variable label
CODMUNIC_6D	code of municipality of maternal residence
date_BR	date (stata numeric code)
codestation	station code
fe_yearmunic	year* municipality code
fe_weekmunic	week*municipality code
RH_dayavg_week0 to RH_dayavg_week_38	relative humidity average from week 0 to week lagged 38
TEMP_dayavg_week0 to TEMP_dayavg_week_38	temperature average from week 0 to week lagged 38
AVT_RH_dayavg_week0 to AVT_RH_dayavg_week38	interaction average temp. and average rel. humidity from week 0 to week lagged 38
NNE_wind_week0 to NNE_wind_week38	share of hours with wind blowing from NNE octant from week 0 to week lagged 38
ENE_wind_week0 to ENE_wind_week38	share of hours with wind blowing from ENE octant from week 0 to week lagged 38
ESE_wind_week0 to ESE_wind_week38	share of hours with wind blowing from ESE octant from week 0 to week lagged 38
SSE_wind_week0 to SSE_wind_week38	share of hours with wind blowing from SSE octant from week 0 to week lagged 38
SSW_wind_week0 to SSW_wind_week38	share of hours with wind blowing from SSW octant from week 0 to week lagged 38
WSW_wind_week0 to WSW_wind_week38	share of hours with wind blowing from WSW octant from week 0 to week lagged 38
WNW_wind_week0 to WNW_wind_week38	share of hours with wind blowing from WNW octant from week 0 to week lagged 38
NNW_wind_week0 to NNW_wind_week38	share of hours with wind blowing from NNW octant from week 0 to week lagged 38

nowindmeas_week0 to nowindmeas_week38 share of hours with no wind measured from week 0 to week lagged 38

nr_fires5_week0 to nr_fires5_week38 number of fires within city limits from week 0 to week lagged 38

pv_nr_risks50_week0 to pv_nr_risks50_week38
number of risk adjusted fires within 5-50km from center (prevailing octant) from week 0 to week lagged 38

res_nr_risks50_week0 to res_nr_risks50_week38
number of risk adjusted fires within 5-50km from center (non-prevail. octant) from week 0 to week lagged 38

nr_risks50_week0 to nr_risks50_week38
number of risk adjusted fires within 5-50km from center from week 0 to week lagged 38

zpv_nr_risks50_week0 to zpv_nr_risks50_week38
z-scored number of risk adjusted fires within 5-50km from center (prevailing octant) from week 0 to week lagged 38

zres_nr_risks50_week0 to zres_nr_risks50_week38
z-scored number of risk adjusted fires within 5-50km from center (non-prevail. octant) from week 0 to week lagged 38

znr_risks50_week0 to znr_risks50_week38
z-scored number of risk adjusted fires within 5-50km from center from week 0 to week lagged 38

LOCCODMUNIC_1 to LOCCODMUNIC_13 municipality indicators

pop birth cohort size (used as weights)

meanbr_weight mean birth weight in date-location

meanbr_lowbweight mean prevalence of low birth weight births (<2500 grams) in date-location * 1000

meanbr_vlowbweight	mean prevalence of very low birth weight births (<1500 grams) in date-location * 1000
meangestationage	mean gestation age in date-location (weeks)
meanbr_premature	mean prevalence of premature births in date-location * 1000
meanbr_vpremature	mean prevalence of very premature births in date-location * 1000
meanbr_female	mean female births in date-location
meanbr_male	mean male births in date-location
meanbr_white	mean white births in date-location
meanbr_black	mean black births in date-location
meanbr_brown	mean brown births in date-location
meanmom_age_under25	share of moms under age 25 by date-location
meanmom_age_25to35	share of moms aged 25 to 35 by date-location
meanhadmiscarriage	share of moms with previous miscarriage by date-location
meanhadlivebirth	share of moms with previous live-birth by date-location
meanmom_married	share of moms formally married when child born by date-location
meanmom_cohabit	share of moms informally married when child born by date-location
meanmom_maritalDK	share of moms with unknown marital status by date-location
meanmom_nosch	share of moms with no schooling by date-location
meanmom_elementary	share of moms with elementary education by date-location
meanmom_high	share of moms with high-school education by date-location
meanmom_college	share of moms with college degree by date-location
meanmom_schDK	share of moms with unknown education by date-location
meanmom_HSless	share of moms with High-school or less by date-location
meanbr_gestunder22	share of gestations under 22 weeks in date-location
meanbr_gest23to27	share of gestations between 23 and 27 weeks in date-location
meanbr_gest28to31	share of gestations between 28 and 31 weeks in date-location
meanbr_gest32to36	share of gestations between 32 and 36 weeks in date-location

meanbr_gest37to41	share of gestations between 37 and 41 weeks in date-location
meanbr_gest42abov	share of gestations of more than 41 weeks in date-location
meanbr_gestDK	share of gestations of unknown duration in date-location

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7. fires_birthoutcomes_wfetaldeath.dta

Same variables as in the previous data set, with the addition of:

meanfetaldeath	mean prevalence of fetal deaths in date-location * 1000
poplive	size of live and dead births population in date-location
lnlivepop	ln transform of size of live births population in date-location
rate1day	share live births who died by first full day of life of life * 1000
rate1week	share live births who died by first week of life * 1000
nr_fetalgrowth1d	count of fetal growth hospitalizations in 1st full day of life
nr_all_bd1d	count of all hospitalizations in 1st full day of life