Note: Results are generated using Stata 14 and R 4.1.0. Before running programs in Stata, set directory to the root of the replication folder.

Scripts for Analyzing Final Data Set

1. tab2_descriptives.do – Creates descriptives table, Table 2
2. tab3-4_regs-no-lags.do – Runs regressions and creates Table 3-4 and B2-B3
3. fig3_lagscatter.do – Runs regressions and creates Figure 3
4. tab5_policy-expmt.do – Performs policy experiment and creates Table 5
5. xfig1_fire-map.R – Creates fire map (Figure B1)
6. xfig2_histogram.do – Creates histogram of fire spread distance (Figure B2)
7. xtab1_fire-descriptives – Creates fire characteristic summary statistics (Table B1)
8. xtab4_angles.do – Performs robustness checks examining consequences of choice of spread directions (Table B4)
9. xtab5_vacation-homes.do – Performs robustness checks looking at effects of additional housing characteristics (Table B5)
10. xtab6_firesize.do – Performs robustness checks examining effect of using only fires larger than 5,000 acres (Table B6)
11. xtab7_lag-table-unconstrained.do – Creates tables showing coefficient estimates for unconstrained distributed spatial lead models. (Tables B7-B8).
12. xtab8_lag-table-almon.do -- Creates tables showing coefficient estimates for Almon-weighted distributed spatial lead models (Tables B9-B10).

Programs

The main scripts call four programs, which produce data sets, run regressions, and produce data tables. These programs are:

- program_data.do – This script generates variables needed for regressions. This script is run before each analysis script.
- program_distlag.do – This script estimates unrestricted and Almon-weighted distributed lag models, used to produce Figure 3, and Tables B8-B11.
- program_regs.do – This program runs various specifications of spread-distance regressions and saves results. Program options can specify the various binary response functions, for use in robustness checks.
- program_regtable.do – This program produces regression tables output via `estout`. In the main table scripts, the `tex` option is specified, which causes the program to output a table body (without column headers, tabular environment, table captions, etc.) for use within LaTex table. Users can remove the `tex` option to view results in the Stata results window.

Data sets used in final programs

- The primary circular grid cell-level data set, with 24 directions of spread for each fire: "data/20-by-1km_15deg/data_centroid.dta"
- The sample of fires used in the Census data analysis: "data/20-by-1km_15deg/sample_census.dta"

- The sample of fires used in the assessors' data analysis: "data/20-by-1km_15deg/sample_assessors.dta"
- A circular grid cell-level data set, with 6 directions of spread for each fire: "data/20-by-1km_60deg/data_centroid.dta"
- The primary circular grid cell-level data set, with 12 directions of spread for each fire: "data/20-by-1km_30deg/data_centroid.dta"
- A circular grid cell-level data set, with 48 directions of spread for each fire: "data/20-by-1km_7.5deg/data_centroid.dta"
- Shapefile of western state boundaries: "data/geo/western/western_states.shp"
- Fire occurrence database, containing data on characteristics of individual fires: "data/geo/FireOccurrence_KShort/Data/FPA_FOD_20170508.gdb"
- A .csv containing fire ignition data and fire characteristics: "Processing/Ignitions/csv/IgnTableWest.dta"