When Your View Goes Up In Flame: Effect of Wildfires on Property Values in Los Angeles

Cloe Garnache

The frequency and severity of wildfires have increased dramatically in the recent past, with a growing number of properties directly or indirectly affected. Properties located near the wilderness often benefit from scenic vistas and other amenities such as recreation opportunities nearby. However, proximity to the wilderness may also come with disamenities caused by wildfires such as view of a burn scar, local air pollution, and risk of wildfire damage.

Studies on the effect of wildfires on property values have primarily focused on forest fires in low-density population areas such as the Rockies. This paper makes multiple contributions to this literature. First, we investigate the effect of wildfires on property values in a large and rapidly growing urban area (the Los Angeles Basin). Second, the wilderness in our study area mostly consists of shrubs, for which burn scars remain visible for at most a few years compared to decades for forest fires. Third, our identification strategy employs nearest neighbor matching estimators with controls not in direct proximity of the wildfire perimeter, with no view of the burn scar, or in low risk zones to estimate the effect of proximity to a wildfire, visual disamenity related to a burn scar, and changes in homeowners’ risk perceptions.

We have assembled a unique data set containing property sales transactions, property and neighborhood characteristics, environmental amenities, and wildfire characteristics. We purchased from CoreLogic sales transaction data between 2000 and 2015 in seven counties for properties located within 30 km of the four National Forests surrounding the Los Angeles Basin. After cleaning the data and dropping outliers, our data set contains 1,223,936 transactions; among them are 588,230 properties with repeat sales. We obtained data on wildfire perimeters for fires that burned over the period 1990-2015 from the California Department of Forestry and Fire Protection. This time period includes years with relatively few wildfires in the 1990s, and some of the worst fire seasons California has seen in 2007 and 2009. For each property, we calculated distances to fire perimeters in ArcGIS and ran a viewshed analysis to infer burn scar view.

One of our model specifications considers as treated properties with a view of a burn scar that is less than a year old and that are located within varying distance bins (1 km, 1-2 km, 2-3 km, 3-4 km). Variables used for matching includes property characteristics and environmental amenities such as distance to nearest park and to urban centers. Exact matches are required on fire and sale year. Preliminary results show a negative effect of a burn scar view between 2 and 12% of a property value for properties located within 1 km of a fire perimeter. The effect of visual disamenity from burn scars remains negative and significant up to 3 km from a fire.