

SHAKING UP SMALL BUSINESS:

The Impact of Seismic Retrofitting on Small Businesses in 3 San Francisco Supervisor Districts

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RESEARCH QUESTION

Does the Mandatory Seismic Retrofit Program disproportionately impact small businesses in lower-income communities?

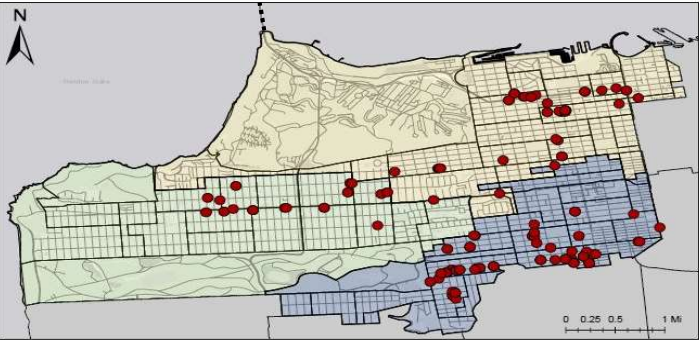


FIG. 1. IMPACTED COMMERCIAL SPACES

Results for Supervisor Districts	1	2	5	Total
Impacted Commercial Spaces	32	49	99	180
Turned Over	18	27	54	99
Vacant	5	11	11	27
Impact Measurement	72%	76%	66%	70%

LEGEND

Supervisor Districts

- District 1
- District 2
- District 5

“Natural” turnover and vacancy ranges between 5-25%

Retrofitted Structures

- Impacted Commercial Spaces

Impact Measurement

- Not Impacted (0%)
- “Naturally” Impacted (1- 25%)
- Significantly Impacted (26-75%)
- Extremely Impacted (76-100%)

Commercial Census Tracts

- Census Tract Boundary

Roads

- Roads

Golden Gate and Bay Bridge

- Bridges

Median Household Income

- ≤ \$50,000
- \$50,001 - \$85,000
- \$85,001 - \$115,000
- \$115,001 - \$150,000

PROJECT OVERVIEW

In 2013, the San Francisco Board of Supervisors established the Mandatory Seismic Retrofit Program. Requiring all ‘soft-story’ buildings – defined as structures with ‘soft’ wall lines – to seismically reinforce their ground floors, the law is an example of proactive environmental resiliency planning. However, the legally sanctioned passthrough of capital improvement costs onto commercial tenants has resulted in an unintended consequence: extreme rent burden. I will spatially analyze the impact of mandatory seismic retrofitting on small businesses across three San Francisco Supervisor Districts: 1, 2, and 5, each of which represent different median income levels for my comparison. I gain further detail on the Program’s impact by comparing commercial census tracts (where clusters of businesses exist) within the districts.

RESEARCH METHODS

I collated the addresses of all retrofitted structures with commercial space(s) as well as related building permits from San Francisco’s Planning Information Map. Additionally, I reviewed business records via DataSF to determine the lease and vacancy information for commercial spaces. Since physical site visits were not possible, I attempted to confirm the status of small businesses in cases of conflicting business records by using Google Maps, Yelp, and commercial leasing websites. I then compared a property’s construction timeline against its commercial lease start and end dates to determine the fate of each small business: survival, sale (turn over), or shut down (vacancy). I spatially represented this data by first geocoding the identified addresses and then performing a spatial join to tabulate an “Impact Measurement.” The Measurement combines the sum of turned over small businesses and the sum of vacant commercial spaces and divides the result by the total number of impacted commercial spaces. I have compared the Impact Measurement against each census tract’s Median Household Income (aggregated from the U.S. Census Bureau) to observe the relationship between the Program and lower-income communities.

RESULTS

There is no clear spatial relationship between the most impacted tracts and lower-income tracts. However, the Program has significantly, and sometimes extremely, impacted most districts, to the detriment of small businesses.

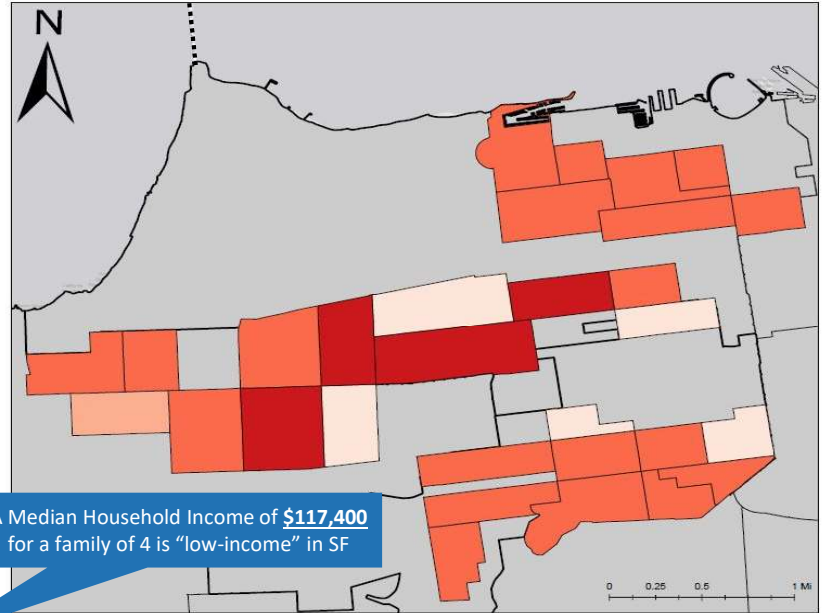


FIG. 2. IMPACT MEASUREMENT BY COMMERCIAL CENSUS TRACT

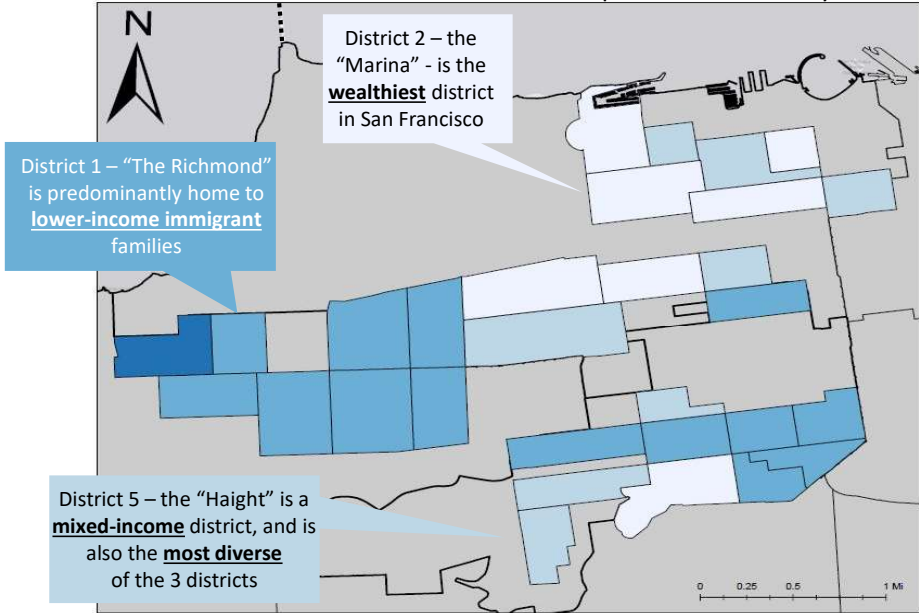
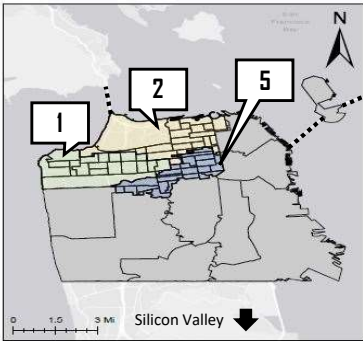


FIG. 3. MEDIAN HOUSEHOLD INCOME BY COMMERCIAL CENSUS TRACT



DEFINITIONS

Turned Over – a new small business occupies the retrofitted commercial space
Vacant – no small business occupies the retrofitted commercial space

SOURCES

SF Planning Information Map; DataSF; U.S. Census Bureau; Google Maps; Yelp; LoopNet; 42 Floors; CityFeet