Residential development supports the idea that eliminating minimum parking Parking Reform & Housing Affordability: Lessons from San Francisco requirements can be an effective tool to address California's housing crisis

he urban planning literature paints a pretty clear picture of minimum parking requirements as a flawed policy tool. From Bertha¹ in 1964 through Andersson et al.² in 2016, a growing body of research strongly suggests that by mandating excessive parking, zoning codes increase automobile dependency, undermine housing affordability, and reduce urban density.

The planning profession has begun to take note of the criticism. More than 125 cities relaxed parking standards in their downtowns between 2005 and 2011,³ and more have joined their ranks since then.

Few studies to date have studied the impacts of these reforms, particularly the housing cost impacts. This leaves cities that may be considering similar strategies with little indication of what they might be able to accomplish. If eliminating minimum parking requirements does stimulate more affordable housing, it could prove a valuable tool for communities across California, which continues to grapple with a statewide housing crisis.

> Starting in 2005, San gradually Francisco minimum eliminated parking requirements for much of its downtown and surrounding areas. The Market and Octavia Plan Area was one of the first. Similar reforms were not applied to the nearby Van Ness Special

Study Area

Market and Octavia

Plan Area



Use District for almost eight years. This study takes advantage of this natural experiment by focusing on a 2.6-square-mile area, centered on Market Street and North Van Ness Avenue, that encompasses both of these medium-density, transit-rich planning districts.



Using official City and County of San Francisco databases and documents, the study collected data on all real-estate developments within the study area with at least 10 housing units and which were approved by the San Francisco Planning Commission between April 2008, and November 18, 2014 (the dates when zoning changes took effect). Statistical tests compared these two groups based on four outcome variables that measured:

Parking supply Housing density The proportion of affordable, belowmarket-rate units Estimated construction costs based on building permits

The above map shows all 44 developments in the study: 14 with a minimum parking requirement of one space per unit, and 30 with no minimum requirement.

Results indicate that residential developments with a minimum parking requirement Findings differed significantly from those without a requirement for all four outcome variables. Significance was analyzed using two-tailed t-tests assuming unequal variances. For the number of parking spaces per unit, $p \le 0.01$; for the other variables, $p \le 0.05$.

Figure 2: Values for Outcome Variables by Parking Requirement

Methodology

Business as usual: Had the city maintained parking minimums throughout the study area, developers would have produced an additional 1,577 parking spaces occupying 473,230 square feet.





The study results provide strong evidence that San Francisco's efforts to reform off-street parking Conclusion requirements influenced the amount, cost, and form of new housing developments in the city. Far more below-market-rate units were produced in no-minimum zoning districts, and estimated housing expenses in those areas are more in line with what a two-person household earning San Francisco's median income can afford.

In summary, doing away with parking minimums shows promise as a tool for encouraging housing affordability. This study joins Manville⁴ and Hallowell and Stoy⁵ in supporting the idea that easing parking requirements can translate to savings of hundreds of dollars per month in housing expenses for residents. Any city confronting a crisis in affordability should look closely at its parking policy. Given the scope of California's housing challenges, communities that are still requiring a minimum amount of parking for projects in transit-rich, mixed-use neighborhoods ought to be asking themselves, "Why?"

The quadrants below explore findings for each of the four outcome variables. In addition to a discussion of the results for the two test groups, each quadrant also contains a "Business as Usual" scenario. These hypothetical estimations represent what might have happened if San Francisco had continued to require one space per unit throughout the entire study area, i.e. if every development in the dataset exhibited the characteristics of the 14 buildings that were subject to a minimum.

4. Michael Manville, "Parking Requirements and Housing Development: Regulation and Reform in Los Angeles," Journal of the American Planning Association 79, no. 1 (2013): 49-66. 5. Alexandra Hallowell and Kelan Stoy, "The Rent is Too Damn High: Parking and Affordability in Portland, Oregon," paper presented at Transportation Review Board 94th Annual Meeting, Washington, DC, January 11-15, 2015.

All images, maps, and charts are the author's original work, except for outcome variable icons, which are by Freepik from www.flaticon.com and licensed by Creative Commons BY 3.0.

1. Brian Bertha, "Appendix A: Impacts of Oakland's Zoning Change," in The Low-Rise Speculative Apartment, by Wallace Smith (Berkeley, California: UC Berkeley Institute of Urban and Regional Development, 1964).

2. Matts Andersson, Svante Mandell, Helena Braun Thörn, and Ylva Gomér, "The Effect of Minimum Parking Requirements on the Housing Stock," Transport Policy 49 (2016): 206-215. 3. Donald Shoup, The High Cost of Free Parking, updated ed. (Chicago: American Planning Association Planners Press, 2011), xxxi.

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