The Opportunity Cost of Parking Requirements: Would Silicon Valley Be Richer if its Parking Requirements were Lower?

Michael Manville
CJ Gabbe
Taner Osman

UCLA Institute of Transportation Studies
mmanvill@ucla.edu

Project Objective

To estimate the inventory of parking in Silicon Valley's cities, and to then estimate the potential lost productivity that results from allocating so much valuable land to a low-value use.

Problem Statement

Silicon Valley is both extraordinarily productive and, given its productivity, surprisingly low-density. One reason for that low density is the inordinate share of the commercial and industrial land that is devoted to parking. This high parking share is in part an artifact of the region's high minimum off-street parking requirements. These parking requirements essentially impose low-value uses on high value land. This in turn implies a large opportunity cost. A Silicon Valley with lower parking requirements might have less parking, and less parking could enable more clustering of firms and workers. More clustering, in turn, could make the region more productive. If this so, local parking requirements are restraining one of the world's most dynamic urban economies. That is the idea we examine here.

Research Methodology

There is, unfortunately, no tried-and-true and generally-accepted way to determine the parking inventory of an entire region. Our approach, as a result, should be understood an *estimate*, not a precise count, although we think it is reasonable and conservative. We first secured data from on every parcel of land in Silicon Valley from the Santa Clara County assessor's office. For each parcel, we estimated the building footprint (by dividing total building area by number of stories) and then subtracted that estimated footprint from the parcel area. This leaves us with the parcel's non-building area.

We assume, conservatively, that 70% percent of the non-building area is parking. We then generate a count of parking spaces by assuming--following convention--that an off-street parking space requires 300 square feet, once driveways and lanes between rows of spaces are accounted for.

From there we need to determine if the parking spaces are actually products of the zoning. Some spaces would exist even if the zoning did not. We make this determination by inventorying the parking requirements themselves, and then matching the requirements to each developed parcel. This lets us generate an estimate of each parcel's required parking, which we compare to the amount of parking we estimate is actually there. To simplify, when the counts are close, the requirement binds.

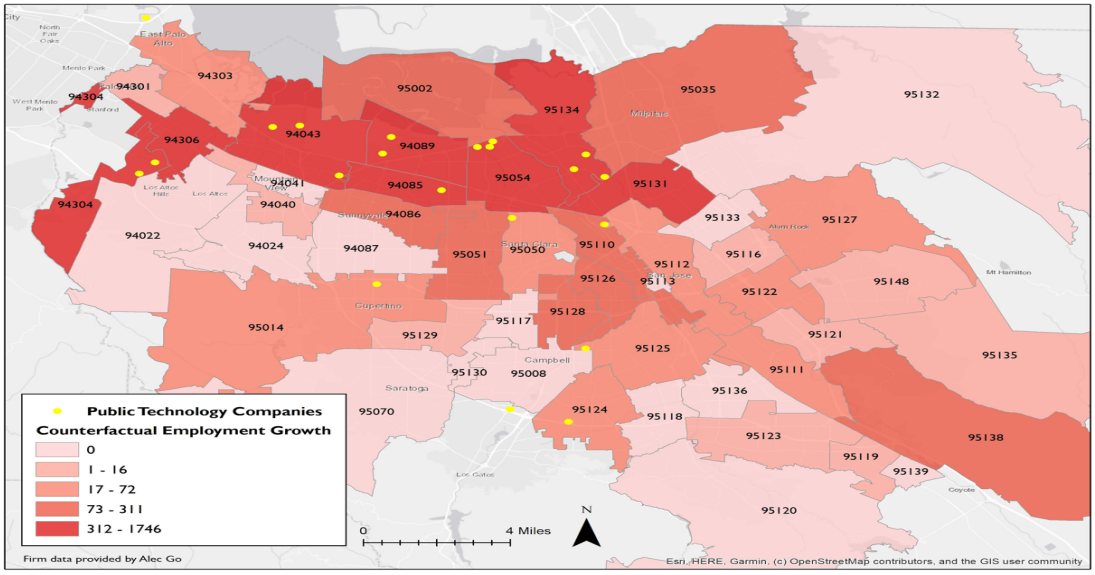
With these data assembled, we create a counterfactual scenario. This is essentially a thought experiment where we assume that the cities we study reduced their parking requirements by 50 percent in the year 2000. Having assumed this, we estimate how much less parking would have been built, how much more building space could have been constructed, and how many jobs could have been accommodated in that new built space.

Results

Silicon Valley, is by our estimate, awash in parking. Over half the typical parcel is devoted to parking, and about 14 percent of the land area in the cities we study is off-street parking. Much of this parking, furthermore, appears to be a result of the region's zoning laws. By our calculations, had the parking requirements been lower, the region would have saved over 11 million square feet in parking space, and if just half of that space had been converted to productive use Silicon Valley would added almost 13,000 more jobs between 2000 and 2016 than it actually did. Since the region added about 30,000 jobs during this time, a 13,000 job increase represents a 43 percent increase over the trend—a sizeable gain.

Use category	Parking spaces - Actual	Parking spaces - Counterfactual	Parking change in counterfactual (spaces)	Parking change in counterfactual (sq. ft.)	Additional housing units*	Additional employment**
Industrial and manufacturing	672,137	671,382	(755)	(226,551)	n/a	164
Multifamily	308,372	299,396	(8,976)	(2,692,680)	6,732	n/a
Office	283,640	266,050	(17,590)	(5,276,919)	n/a	10,388
Other urban	28,089	27,576	(513)	(153,804)	n/a	111
Public/quasi-public	120,949	120,949	-	-	n/a	-
Retail	344,556	335,664	(8,892)	(2,667,741)	n/a	2,223
Total	**1,757,743**	**1,721,017**	**(36,726)**	**(11,017,695)**	**6,732**	**12,886**

These new jobs, by our estimate, would have been added disproportionately in the parts of the Valley where wages and venture capital investment are highest—these are the areas where the largest public technology firms are located.



In summary, our findings strongly suggest that strict parking mandates do not just needlessly create an auto-oriented built environment. They also consume land that could be used much more productively in other ways.