Title
Pricing Parking by Demand: Assessing Price Adjustments in the SFpark Program

Authors
Pierce, Gregory
Shoup, Donald
Holmes, Nathan

Publication Date
2013-04-01

POLICY BRIEF

PRICING PARKING BY DEMAND

Assessing Price Adjustments in the SF*park* Program

Gregory Pierce and Donald Shoup - 2013

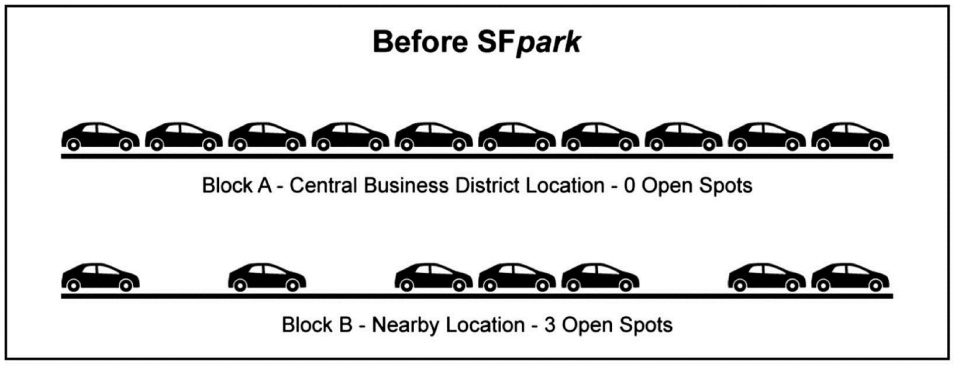
Brief by: Nathan Holmes

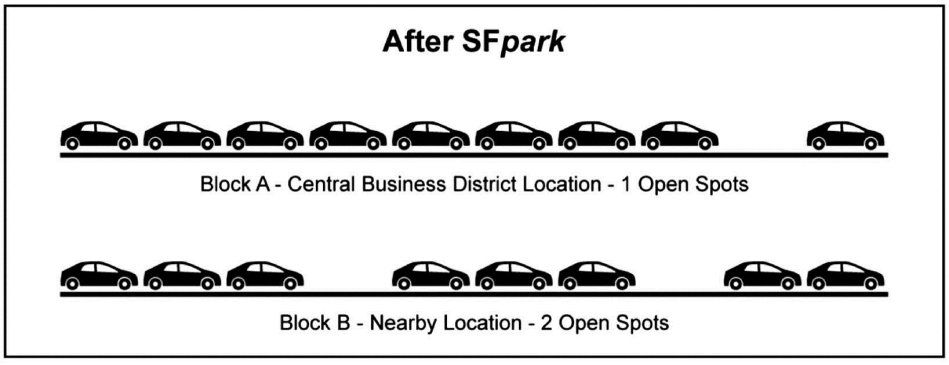
UCLA Lewis Center www.lewis.ucla.edu

UCLA ITS INSTITUTE OF TRANSPORTATION STUDIES www.its.ucla.edu

RESEARCH TOPIC

In 2011, San Francisco adopted SF*park*, the most innovative pricing program for parking since the invention of the parking meter. SF*park* aims to vary the price of curb parking by location and time of day, with the goal of achieving a consistent block occupancy rate between 60 and 80 percent. This occupancy rate ensures that curb parking is both well used and readily available. Over two years, SF*park* adjusted prices every two months in order to achieve the 60 to 80 percent occupancy rate, and this article assesses SF*park*'s overall performance with respect to such price changes.





Performance prices balance occupancy on every block

STUDY

Before each price change, SF*park* publishes data on the occupancy and prices for all 7,000 curb spaces in the program's seven pilot zones. Since the price elasticity of demand measures how these price changes affected occupancy rates, researchers calculated 5,294 total elasticity measurements and assessed the program's progress towards the target block occupancy rate of 60 to 80 percent.

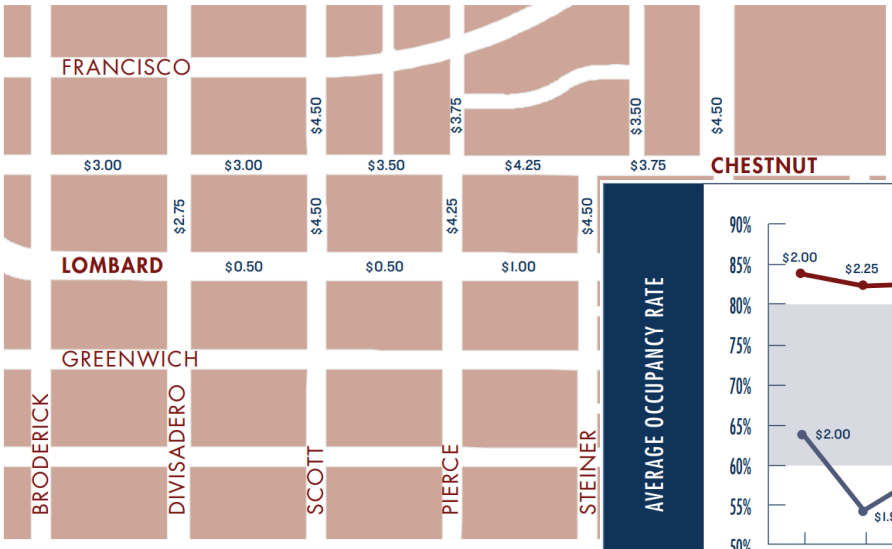
MAIN FINDINGS

- **The average price of a parking space fell 4 percent,** which means SF*park* adjusted prices up and down according to demand without increasing prices overall. Parking prices increased in 31 percent of the cases, declined in 30 percent, and remained the same in 39 percent.

- **62 percent of blocks were in the target range of 60 to 80 percent occupancy** after the program had been operating for two years. Altogether, a third of all the blocks that had been over- or under-occupied at the beginning of SF*park* had shifted into the target occupancy range.

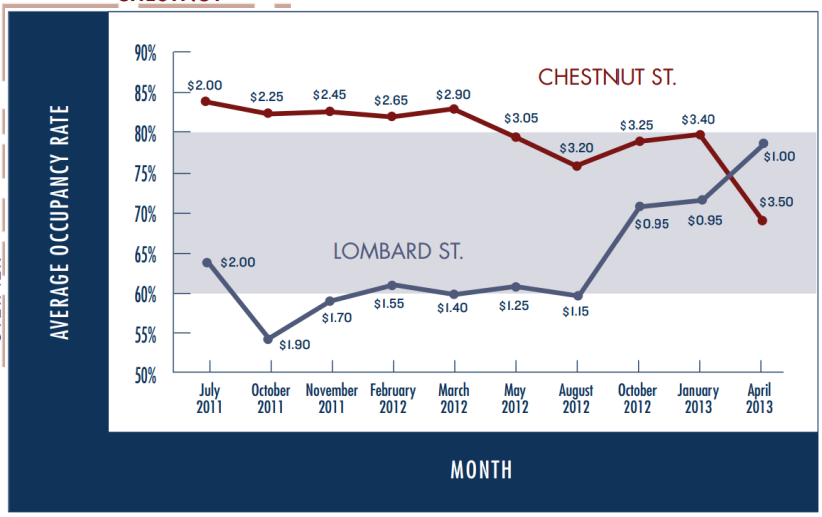
- **The average price elasticity of demand was –0.4,** but individual responses to price changes at the block Level were astonishingly varied. In the numerous cases where occupancy increased after prices rose or occupancy fell after prices fell, other factors must have overwhelmed the effects of prices on occupancy.

- **The wide range of elasticity at the block level also suggests that the circumstances on individual blocks vary greatly** and that planners will never be able to estimate an accurate elasticity to predict the right prices. Other cities should emulate SFpark and trial-and-error method to adjust prices in response to the observed occupancy.



Parking Prices on Chestnut and Lombard Streets
April 2013, 3pm to 6pm

Average Parking Prices and Occupancy Rates on Chestnut and Lombard Streets, 3pm to 6pm



RECOMMENDATION

Our research suggests three ways to build on SFpark's success:

- Use seasonally-adjusted demand instead of past month occupancy as the criteria for setting prices.
- Refine the time periods of operation to better manage peak parking periods- for example, charge for parking during evenings in areas with high demand.
- Reform the disabled parking placard system, where rampant fraud inhibits the ability of price-adjustments to manage occupancy rates.

Pierce, Gregory and Donald Shoup, 2013. "**SF*park*: Pricing Parking by Demand**" *ACCESS,* 43.