

Pricing Parking By Demand

Assessing Price Adjustments in the SFpark Program

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RESEARCH TOPIC

In 2011, San Francisco adopted SFpark, the most innovative pricing program for parking since the invention of the parking meter. SFpark aims to vary the price of curbside 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 curbside parking is both readily available and at the same time accommodates as many customers as possible for adjacent businesses. Over a period of two years, SFpark adjusted prices every two months in order to achieve the 60 to 80 percent occupancy rate, and this article assesses SFpark's overall performance with respect to such price changes.

Before SFpark



After SFpark



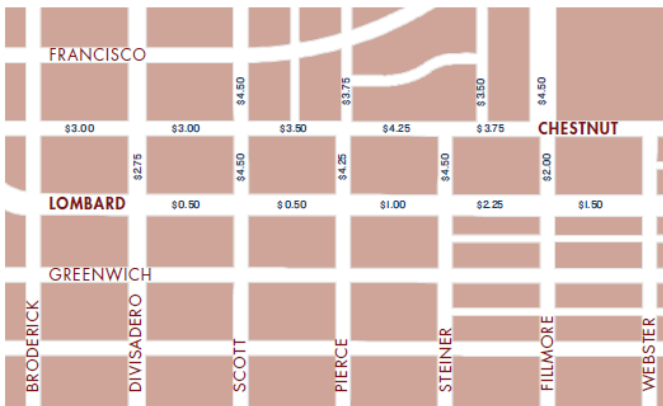
Performance Prices Balance
Occupancy on Every Block

STUDY

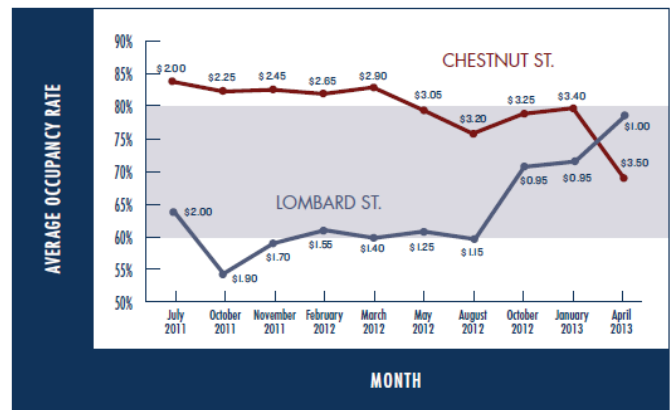
Before each price change, SFpark publishes data on the occupancy and prices for all 7,000 curbside spaces in the program's seven pilot zones. Since the price elasticity of demand measures how these price changes affected occupancy rates, researchers calculated 5,294 total elasticity measurements and 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 *SFpark* 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 *SFpark* had shifted into the target occupancy range.
- **The average price elasticity of demand was -0.4** , but when we plot the elasticity for individual price changes at the block level, we find astonishing variety. Given that at times there were higher occupancy rates after prices rose and lower occupancy rates after prices fell, other factors must have overwhelmed the effects of prices on occupancy in these cases of positive price elasticity.
- **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 prices. It is clear the best way to achieve target occupancy is to emulate *SFpark* and use a trial-and-error method to adjust prices in response to the observed occupancy.



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



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

RECOMMENDATION

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

- Use future demand instead of past 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.