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Bike Theft: Estimating the Magnitude and Impacts on Bicycling Behavior

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Seth Herr, Bike Index

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Issue

As cities invest in bicycle lanes to encourage active transportation, it may also be important to ensure safe bicycle parking and other measures of theft prevention. The magnitude of the problem is largely unknown, but it may be substantial given the ease of breaking bike locks, the potential for resale, and the challenges for law enforcement. Also, studies have shown that bike theft can deter a person from bicycling more in the future due to the difficulty replacing the bike or because they are concerned about another theft.^{1,2}

To better understand the impact of theft on cycling behavior and assist cities to determine where and how to invest in bike infrastructure and other strategies to ensure that all Californians have access to bicycling, we conducted a survey of bicycle thefts and recoveries. The study produced suggestions for the State's Active Transportation Program, and other funding programs for bicycling.

Key Research Findings

The majority of bicycle thefts occurred overnight (41%) from inside a shed or garage (28%). Outdoor bicycle racks are the second most common theft location (18%). The least likely time for a theft to occur is in the morning (9%). Respondents indicated that 99 percent of the time the

whole bicycle was stolen, not just parts. Most of the time stolen bicycles were locked (59%). Cable locks (35%) and U-locks (26%) were the most commonly used locks.

Only 15 percent of stolen bikes were recovered. While this indicates a low likelihood of recovery, it was a higher percentage than previously reported in both the U.S. and the U.K. (5%).^{3,4} Knowing when your bicycle was stolen, having your bicycle registered, and reporting the theft through multiple channels aided recovery. Only 9 percent of respondents who were unaware of the time their bicycle was stolen recovered it.

Forty-seven percent of those that had their bike stolen cycled less or stopped cycling entirely. Reduced riding was most common among people new to bicycling, people with only one bike, and those who did not recover their bike. Among individuals who didn't ride often, or less than once a month, a substantial majority of 81 percent experienced reduced cycling after the theft while only 21 percent of those who consistently rode four or more days per week did. This also varied by education level; 21 percent of those with some high school or less discontinued cycling compared to only 12 percent among those with a graduate degree. Twenty percent of those with income less than \$20,000 rode less after having their bike stolen compared to just 8 percent of those with income exceeding \$150,000. Nine

percent of those with only one bicycle rode less but none of those with five bicycles or more did so.

Trips that would have been made by bicycle are often replaced by non-active travel modes after a bicycle theft. Among those surveyed over half opted for non-active transportation alternatives. For women, 64 percent of respondents that would have taken trips by bicycle either didn't take the trip at all or used a non-active mode of transportation after their bicycle was stolen. For men, it was 51 percent. When pedal bikes were stolen, 47 percent of replacement trips were made by non-active transportation modes. For e-bikes, non-active replacement trips increased to 58 percent and further rose to 66 percent among owners of e-bikes equipped with both pedal-assist and throttle mechanisms.

One quarter of stolen bikes were not replaced. Another quarter were replaced by a bike of lesser value. Individuals with low income and those with less expensive bicycles (under \$500) that were stolen were less likely to replace their bicycle. Thirty-five percent of those earning less than \$50,000 per year opted not to replace their bicycles, compared to only 22 percent of those earning more than \$200,000 per year.

Recommendations

To help mitigate the negative impacts of bicycle theft, several key findings can inform effective prevention and recovery strategies. First, owners of high-value bicycles often take proactive measures, such as storing their bikes indoors and quickly noticing when they go missing. However, even when stored indoors, using a high-quality lock remains crucial in deterring theft. Second, the likelihood of recovering a stolen bicycle increases when multiple recovery methods are employed, particularly when law enforcement is involved—though overall success rates remain low. Finally, bicycle recovery rates improve when a well-utilized bicycle registry is in place, especially when both the public and police actively engage with it.

Further Reading and More Information

This policy brief is drawn from the pre-print of the Transport Findings article “Patterns in Bike Theft and Recovery” prepared by Achituv Cohen and Trisalyn Nelson with the University of California, Santa Barbara, and Dillon Fitch-Polse with the University of California, Davis, which can be found at: <https://www.ucits.org/research-project/2023-09/>. For more information about findings presented in this brief, please contact Trisalyn Nelson at trisalyn@ucsb.edu.

¹Poulos et al. (2012). Accident Analysis & Prevention. <https://doi.org/10.1016/j.aap.2015.02.008>

²Winters et al. (2011). Transportation. <https://doi.org/10.1007/s11116-010-9284-y>.

³Asgard. (2023, November 1). Bike Theft Statistics. <https://www.asgardsss.co.uk/asgard-bike-theft-statistics>

⁴Socalcycling. (2022, February 28). Bicycle Theft is Becoming Increasingly Common. <https://socalcycling.com/2022/02/28/bicycle-theft-is-becoming-increasingly-common/>

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