

Adam Isen
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Russell Ackoff Doctoral Student Fellowship Proposal:
Using Special Events to Estimate the Effect of Police on Crime in the Short Run

Project Summary:

The cost of crime and crime prevention in the United States is in the hundreds of billions of dollars. Determining the effect of the police force on crime would better allow decision-makers to balance these costs. Additionally, there is a debate on how well standard economic theory can explain criminal behavior. However, the economics of crime literature has yet to provide a completely satisfactory answer.

Optimally allocating police officers is a challenging example of decision-making under uncertainty. In the short run, municipalities only have a finite number of officers, and they themselves need to get in the minds of criminals in choosing the best allocation among the competing risks of different crime types and their geographic variation. Criminals in turn are undertaking risky behavior with a potentially high positive or negative payoff.

The effect of the allocation of police officers on criminal behavior is measured in this study by using new data and a superior methodology than the existing literature provides. The project measures the effect of police on crime in the short run using special events in Los Angeles city. Special events, defined as any event that precipitates a change in citywide police officer deployment – whether it be an awards show, marathon, etc. – present a set of natural experiments that can allow me to exploit variations in police deployment that are independent of the crime rate. Los Angeles serves as a unique experiment because there are many events held each year and the

supply of officers is completely inelastic; overtime is prohibited, and therefore whenever there is a need for a heightened presence in one area of the city, the officers are taken from other areas of the city. Looking at daily crime rates in Los Angeles from January 1st 2002 to December 31st 2004 broken down by division and crime type and the date and division in which each major special event was held and controlling for time effects, preliminary results suggest that police do in fact have a negative effect on crime in the very short run.

The central issue to resolve the longstanding problem of how police force allocation affects crime is whether one can truly measure the effect of police on crime; other areas of the city may experience a slight hike in the crime rate due not to a shift in police deployment but rather to other factors associated with special events. For example, potential criminals may believe that people may be occupied by the awards shows or festivals. In order to test for these possibilities, I am in the process of collecting daily crime numbers from the remaining portion of Los Angeles County (which is under the jurisdiction of the LA Sheriffs department instead of the LA Police Department) to see how events affect the crime rate in areas outside of the city but still contiguous to it.

I propose to further examine another avenue by which police prevent crime, namely taking criminals off the street, by examining whether clearance rates (the ratio of arrests to crimes) fall when police resources are diverted. To that end, I am working on acquiring daily clearance numbers by division and type from Los Angeles City. This data will also allow me to see how well standard economic theory applies to criminal behavior (in addition to having shown that crime goes up when police resources are diverted).

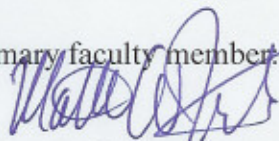
The purpose of funding from the Russell Ackoff Doctoral Student Fellowship will be to purchase crime data from the Los Angeles Sheriffs Department and clearance data from the Los Angeles Police Department, which requires hours of programming by these agencies to generate in order to generate the requisite data for this project. This more detailed data is necessary to write an academic publication that can precisely show the effect of police on crime.

To conclude, this project provides a new means to learn about the relationship between police and a crime, a central decision-making under uncertainty problem for both determining the level and allocation of police and the number of crimes to commit. Given that most other municipalities have overtime for special events, the results can inform cost benefit analysis for overtime decisions.

Other information:

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Signature:



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