2024 Research report summary

What is the effect of police interventions and surveillance cameras on crime?

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Summary

Crime is a significant societal issue, and as a result there is an ongoing debate on how to best reduce it. Society can implement various anticrime measures, such as preventive efforts in education, sports, and social care. Other approaches involve investigating and prosecuting crimes. In this report, I highlight the effect of police interventions and surveillance cameras on crime, two areas that have received significant attention in recent years. Research on how different interventions affect crime can provide valuable information on how society should allocate resources to various initiatives.

Measuring the effects of interventions, however, is not straightforward since there is a significant methodological problem. Interventions are typically implemented where crime is prevalent and increasing. This creates misleading correlations between surveillance and crime. If increased surveillance in an area results in reduced crime, this effect may be masked by an upward trend in criminal activity. Another methodological problem is that multiple types of interventions are often implemented simultaneously. For example, preventive measures may include an increased number of police officers, improved lighting, and new surveillance cameras. In such cases, it is not possible to isolate the effect of a specific type of intervention. There exist research methods that can address this problem. The best method is the use of randomized experiments, where chance determines which areas receive altered surveillance—treatment groups—and which areas remain as control groups. If there are enough areas included in the experiment, treatment and control groups should, on average, be similar before the introduction of the treatment, which makes it possible to draw

conclusions about the relationship between the variables. In practice, it is often not possible to conduct such experiments. Instead, circumstances similar to those of a randomized experiment, so-called natural experiments, can be exploited.

In this report, I highlight research that focuses on the causal relationships between both police presence and crime and between surveillance cameras and crime using robust identification methods. Both international studies and studies conducted with Swedish data are discussed.

How Police Interventions Affect Crime

Results from early studies of police interventions and crime, which did not focus on causality, often showed a positive correlation. These correlations likely capture the fact that police interventions are deployed where crime rates are high. Subsequently, a relatively large number of international studies have been conducted using randomized and natural experimental conditions, which I describe in the report.

Research that uses randomized experiments to study the effect of police interventions at so-called hotspots (areas with a high incidence of crime) shows that police interventions reduce various forms of crime, such as violent crime and theft, especially car thefts. It is of course possible that increased police interventions in an area lead to negative displacement effects, i.e., that the criminals move elsewhere. However, these studies found no support for this.If anything, crime tended to decrease in other areas as well. The results from natural experiments also reveal that police interventions are often effective in the studied environment. Whether these interventions are equally effective in other environments (such as areas with lower crime rates) is unclear.

Relatively few studies have used Swedish data and focused on the causal relationships between police and crime. Existing studies indicate that "supporter police" , interventions targeting prolific offenders, and surveillance in socially disadvantaged areas have been effective at reducing crime. For example, a study of socially disadvantaged areas shows that police reform with increased surveillance reduced crime by approximately 10%. However, since several types of surveillance

interventions were carried out simultaneously, it is not possible to distinguish which part was most effective.

I also highlight a growing body of literature that examines how equipment and various innovative technological solutions in police work have affected crime. For instance, studies show that DNA databases have been highly effective at deterring crime, as was the US police adoption of military equipment.

How Surveillance Cameras Affect Crime

There are many early studies analyzing how surveillance cameras affect crime. However, these studies often involve confounding effects from the simultaneous implementation of various interventions. The selection of areas for the installation of cameras was also often based on previous criminal activity, which may mask the true effect of the cameras. Several international studies address these issues. The results from multiple studies show that cameras reduce crime, especially thefts, in urban environments by between 20 and 25%. There are few studies using Swedish data, but some show that surveillance cameras have reduced crime (thefts and robberies) in the Stockholm subway, disturbances inside football arenas, and violence in socially disadvantaged areas in Gothenburg. Notably, similar to international studies, the study analyzing effects in the Stockholm subway showed that overall crime decreased by approximately 20 to 25%.

Costs and Benefits of Intervention

A problem in research on police interventions, camera surveillance, and crime is that few studies have calculated whether such interventions are worth implementing for society, i.e., weighing the cost against the benefit. One reason for this is that it can be challenging to perform such calculations. Even if one can measure how many crimes are deterred, the question arises of how much utility to assign a prevented crime from a broad social perspective. Nevertheless, some studies attempt such analyses.

A program in the U.S. where federal funds were used to hire local police and assist with technology and strategies (COPS) proved to be cost effective, as did the introduction of DNA databases and a project

in which military equipment was used by the police. Two Swedish studies also showed that the cost of reducing crime using surveillance cameras on the Stockholm subway and inside football arenas was relatively low. An aspect of this problem mentioned earlier is that a reform that increases surveillance in an area may have so-called spillover effects, causing crime in nearby areas to either increase or decrease. Few studies address this but socioeconomic calculations should ideally be complemented with such information.

Conclusion

My overall conclusion is that additional research using Swedish data and robust research methods is needed to provide clearer policy recommendations on which interventions are effective and worth implementing. One way to achieve such studies is to increase collaboration between the police and researchers and ideally conduct randomized experiments. Researchers can assist in designing reforms so that they can be evaluated in a credible manner. With a few more of these studies, I believe decision-makers would be better informed when making their decisions.

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