

Is the Punishment More Certain? An Analysis of CCTV Detections and Enforcement

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Key Takeaways

- Overall, calls for service exhibited shorter dispatch processing times than CCTV detections
- CCTV detections experienced higher case closure rates than calls for service for 6 of 8 crime types
- Surveillance activity steadily (and drastically) decreased over the study period
- Each new phase of camera installation decreased weekly levels of both CCTV detections and enforcement by 47%
- Police officer layoffs decreased weekly detections by 86%
- The introduction of an acoustic gunshot detection system was associated with a 29% reduction in weekly CCTV detections
- Overall, this study supports the notion that CCTV increases certainty of punishment
- Increased effectiveness is largely negated by CCTV detections and enforcement becoming rare as the system expanded

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Research Summary:

The primary preventive mechanism of CCTV video surveillance is considered to be deterrence. It is often taken for granted that the simple presence of cameras increases the certainty of punishment—a key ingredient of deterrence—for crimes observed on CCTV. However, empirical findings from the research literature cast doubt on this assumption. Numerous studies have documented offender willingness to commit crime in sight of CCTV, largely owing to the perception that the presence of a camera does not guarantee criminal infractions will result in enforcement.

“Surveillance barriers” inherent in the practical deployment of CCTV may compromise the police’s ability to detect and efficiently respond to incidents of concern. The size of many surveillance systems places a heavy burden on CCTV operators, with high camera-to-operator ratios meaning that many crime incidents occurring within sight of CCTV go undetected. Given the standard “differential response” policy of police dispatch CCTV may face significant processing delays, similar to what has been previously observed with calls for service.

This study analyzes CCTV’s relation to punishment certainty in Newark, NJ. CCTV detections and 9-1-1 calls for service occurring over a 3-year period are compared across dispatch processing times (i.e. the time between incident reporting and officer arrival on scene) and closure rates (i.e. whether the incident resulted in a police enforcement action). We further examine the frequency of CCTV activity and the impact of various factors on its (downward) linear trend.

Overall, calls for service exhibited significantly shorter dispatch processing times than CCTV detections. Calls for service also exhibited significantly shorter dispatch processing times for incidents classified as either high- or intermediate-priority. CCTV detections exhibited significantly lower process times for drug offenses, disorder offenses, and low-priority incidents.

CCTV detections experienced significantly higher closure rates than calls for service for 6 of the 8 crime types included in the analysis: overall crime, disorder offenses, drug offenses, other crime, high-priority incidents, and intermediate-priority incidents.

Surveillance activity steadily (and drastically) decreased over time. An average of 10.19 CCTV detections and 3.41 subsequent enforcement actions occurred per week over the total study period. The highest levels of activity were evident at the beginning of the CCTV program, when fewer cameras were in place. An average of 26.84 CCTV detections and 9.47 enforcement actions occurred during Phase 1 of the program, when only 11 cameras were installed. During phase 5 of the program—which increased the system size to 146 cameras—only 2.11 CCTV detections and 1.22 enforcement actions occurred per week.

Regression models identified a number of factors associated with decreased surveillance activity. Each new phase of camera installation reduced weekly levels of both CCTV detections and enforcement by approximately 47%. The weeks following police officer layoffs in November 2010 exhibited an approximately 86% reduction in weekly CCTV detections. The introduction of an acoustic gunshot detection system in Newark was associated with a 29% reduction in weekly CCTV detections.

Overall, this study supports the notion that CCTV increases certainty of punishment. Unfortunately, this increased effectiveness is largely negated by CCTV detections and enforcement becoming rare as the system expanded. Police may suffer from expanding CCTV systems absent a plan to maintain early levels of surveillance activity.