THE EFFECT OF CRIME RATE REDUCTION ON PATROL OFFICER TIME, AN ROI ANALYSIS
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September, 2014
Crime doesn’t pay, or so the saying goes. The truth of this statement is relative, but what is clear from a preponderance of studies regarding crime is that crime costs. That cost is clearly social, in the form of individual and community level experiences of victimization. But beyond the financial and psychological costs to the victim(s), studies have also found that the cost of crime impacts varying strata of public service entities, ranging from the judiciary to law enforcement.

Separating these costs and assigning them seems perhaps an unnecessary task, but the parochial nature of public agencies makes such an exercise salient. For example, when speaking with law enforcement agencies, costs borne by the judiciary or corrections agencies are rarely motivating arguments for crime suppression. The inverse is equally true, as corrections entities are rarely motivated by costs incurred by the judiciary or law enforcement. This paper will seek to isolate financial and manpower costs born by one specific sector of public service agencies, that of law enforcement, in order to provide an equation for determining the return on investment (ROI) of lowering crime rates.

ROI is primarily used as a financial term, describing the financial outcome(s) of a specific action or set of actions. As an example, buying a given product and reselling said product at 2X the original purchase provides an ROI of 100% (although selling costs can and do lower the ROI).

One could infer that profit and ROI are one and the same, however ROI is considered a more useful metric for complex business decisions without clear numerical absolute values. For example, deciding to remodel your home could provide zero profit in selling price, but could provide you the pleasure of a remodeled kitchen and also be the reason that a buyer purchases your home instead of a competing property. In this case, the ROI is more of a utilitarian calculation, but there is a return that clearly has value. We could classify the ROI in numerical terms only if we could derive a price differential between what your home with a remodeled kitchen would sell for to the buyer, versus at what price they would buy (if they would even buy it) your home with the existing kitchen. As you can see by this example, ROI has more abstraction than profit, and can also apply to evaluating the financial value of a given action in terms of potential losses if said action is not taken.

In terms of law enforcement agencies, ROI has two primary components, actual dollars budgeted/spent and resources of the agencies (primarily manpower). These two components are intertwined in that the former funds the latter. When determining ROI for an agency in terms of resources, savings derived from greater efficiency can be translated into potential costs of funding more resources if such efficiency gains were not realized. An example of this is active duty patrol officers/policing presence and reductions in crime rates. Lower crime rates result in less officer time spent on responding to crime calls, writing up incident reports, testifying at trials, etc. This creates a virtuous cycle, wherein this reduction in officer time allows more time spent on active patrol by officers, which in itself can further reduce crime.

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In order to calculate manpower ROI, the necessary components of such calculus must include the average cost of a given labor force, the activities of the labor force, and the percentage of time allocated (on average) to each activity component. As stated above, in terms of law enforcement these activities include incident response (calls for service), the creation of incident reports, in-court testimony or out of court depositions, booking offenders (taking violators to police station/jail), and other associated actions. We can classify these actions in larger groupings, such as officer action (preventative patrol, writing tickets) and officer reaction (incident response/calls for service, writing incident reports, in-court testimony or out of court depositions, booking offenders).

In their hallmark report, Improving Patrol Efficiency, Gay, Schell and Schack (1977), calculated the following allocation of patrol officer time: Calls for service 25%, Preventative patrol 40%, Officer initiated activities (tickets) 15%, Administrative tasks 20%. Research conducted by McKinsey and Co. for the city of Detroit (2010) makes a less encouraging allocation of patrol officer time, with only 16% of officer time spent on active patrol. This minimal assessment of actual patrol time has been echoed by Dempsey and Forst (2010), with a host of other activities being attributed to non-patrol time. For the purposes of this paper, we will use only the administrative or paperwork activities of patrol officers. In doing so, we can isolate the paperwork or administrative component of patrol officer time, assigning it a percentage value of 20%, a percentage that is generally agreed to by both the McKinsey & Co. report and by Gay, Schell and Schack.

Creating a common equation for ROI next requires that we arrive at a model for average number of officers per a given population and an average percentage of officers allocated to patrol duties. Fortunately, a 2012 analysis performed by the non-profit International City/County Management Association (ICMA) provides us these numbers. This report cites 2003 Bureau of Justice Affairs (BJA) data showing a national average of 2.5 full time officers per 1,000 citizens and, via its analysis of 62 police agencies, derives a mean of 66% of total officer time being allocated to patrol duties.

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Using this data, for every percent of crime reduction (X = .01), we can assume a corollary reduction of patrol officer time allocated to paperwork (20% of total patrol officer time). If a city has a reduction in crime of 10% (X = .10), then 2% of total patrol officer time will be recouped in the form of available officer time.

As an example, using the ICMA data, we can assume that a city of 100,000 people has 250 police officers, of which (X = .10), then 2% of total patrol officer time (165 active patrol officers x .02) or 3.3 full time officers are newly available for patrol duty. Reducing this equation, we can assume that, on average, for every 1% in crime reduction in a given city, there is an increase of available officers equal to .33% of that city’s total patrol officer force.

This relationship, between crime reduction rates and increased patrol manpower is critically important in times of budget tightening and manpower shortage, such as those we are seeing currently in US law enforcement. Furthermore, the virtuous cycle referred to earlier in this paper is one that has persistence, in that continued reductions in crime rates can result in continued increases in patrol officer availability. On a year over year basis, such a cycle allows cities to more effectively police their communities, increase police presence, and experience other effects of crime reduction, such as higher property values, higher quality of life, lower incarceration costs, and lower levels of crime victimization.

This paper has not sought to focus on these ancillary benefits, for the reasons stated in the opening paragraphs (e.g. parochiality), but instead has sought to illustrate how crime reduction provides a direct connection to increases in available patrol resources. In doing so, the author’s hope is that the simple equation articulated herein provides a concrete argument for the relationship between crime reduction and increased patrol manpower.

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