EPI BRIEFING PAPER

ECONOMIC POLICY INSTITUTE • JUNE 16, 2011 • BRIEFING PAPER #314

FALSE SAVINGS

How cutting police budgets and laying off cops in high-crime cities lacks economic, social, and common sense

BY JEFFREY KEEFE

A recent series of provocative media reports suggest that increased crime rates in certain New Jersey cities are the direct result of police force reductions. An Associated Press bulletin on the website of Philadelphia's Fox TV affiliate ("Crime up in Camden Since Police Layoffs" March 3, 2011) reported that aggravated assaults in Camden, N.J. so far in 2011 had more than tripled compared with the same time period the previous year, while shootings had nearly doubled. "New Jersey's most crime-ridden city has been even worse since nearly half the police force was laid off in January," the article said.

A later AP report in *The Record* ("N.J. crime increases raise issue of police layoffs," May 15, 2011) said that the 65 percent increase in murders in Newark for the first four months of 2011 over the same period in 2009 "has come after much-publicized layoffs that cut nearly 15 percent of the police force at the end of last year, creating an 'I-told-you-so' moment for many observers inside and outside the law enforcement community."

Violent crime—including homicides, shootings, and assaults—was up 21 percent in Newark in the first quarter of 2011 compared with the same period in 2010, reported the *Star-Ledger* ("Bloody weekend in Newark as violence heats up," May 30, 2011).

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While it is difficult to attribute short-term fluctuations in crime to changes in police force staffing levels, researchers have demonstrated a clear relationship between police staffing and crime activity. For example, Leavitt (2004) estimated that the 50,000–60,000 police officers added to the overall police force in the United States between 1991 and 2001—a roughly 14 percent increase—accounted for a 5–6 percent reduction in crime during the same period. According to Leavitt, the $8.4 billion a year cost to increase the number of police officers was more than offset by the estimated $20–25 billion saved by the estimated 5–6 percent reduction in crime, making the $8.4 billion investment in additional police officers worthwhile from a cost-benefit perspective.

The cost-benefit analysis described in this Economic Policy Institute paper shows that the reductions in police forces in five high-crime New Jersey cities will impose costs that are 12.9 times greater than savings from cutting municipal police services budgets. These costs include those incurred by the communities and their residents, crime victims and their families, and property owners and businesses.

This paper finds that:

- In total, across the five cities, we can expect annually 34 more murders, nine more forcible rapes, 527 more robberies, 290 more aggravated assaults, 549 more burglaries, 260 more larcenies, and 479 more motor vehicle thefts as a result of police layoffs. According to these calculations, Camden can expect the greatest growth in violent crime and the property crimes of burglary, and larceny, while Newark can expect the largest increase in vehicle thefts arising from the reduction in police force levels.
- The estimated total annual cost arising from increasing crime attributable to police layoffs in the five cities is $364,448,096, while the cities' estimated budgetary savings are $28,250,000.
- The estimated net losses for the five cities is $336,198,096. As the research suggests, most of these costs of these additional, preventable crimes will be borne by the victims, not the cities.
- The greatest cost to the community, crime victims, families, residents, property owners, and businesses will be borne by Camden, which faces an estimated $121,157,359 in tangible and intangible costs of crime. Because the city was able to save an estimated $5,650,000 in its budget, the net loss for the residents of Camden attributable to police layoffs is $115,507,359. While police layoffs are an understandable reaction for a city with limited fiscal options, from a social or economic perspective, these layoffs are irrational.

Methodology

The analysis in this paper builds on the research methodology developed by Paul Heston of the Rand Institute in his 2010 paper, "Hidden in Plain Sight: What Cost-of-Crime Research Can Tell Us about Investing in Police." Heston's cost-benefit analysis methodology derives costs estimates of major crimes from prior high-quality research in economics and criminology. It then examines and integrates various methods of analysis of the incremental impact of police staffing on crime to develop a reliable estimate of the effect of police employment levels on crimes. Finally, it relies on governmental budgetary information to provide the additional cost to a municipality or city of hiring a police officer. Using this information, the cost-benefit analysis identifies the incremental cost of a police officer to a city and the economic benefit of crime reduction to the community arising from the deployment of an additional officer. Or conversely, as with our application of the methodology, the framework identifies the budget cost savings from reducing police staffing levels compared with the increased costs of crime to the community, the city government, and crime victims attributed to the reduction in force.

Tallying the costs of police layoffs in five high-crime New Jersey cities

Table 1 depicts police layoffs in five high-crime New Jersey cities that face substantial budget shortfalls and have either implemented or plan to implement significant police layoffs to close budget gaps: Camden, Irvington,

TABLE 1

Police layoffs, layoff savings, and pre-layoff crime rates in five New Jersey cities

	Layoffs announced in 2010 or 2011				Population and crime in 2009				
City/town of police dept.	*Layoffs**	*Officers at start*	*Layoff rate*	*Savings from layoffs***	*Population*	*Violent crime total*	*Property crime total*	*Violent crime rate*	*Property crime rate*
Camden	113	317	36%	$5,650,000	78,980	1,880	3,935	2.38%	4.98%
Irvington Twp.	51	210	24	2,550,000	55,838	1,016	2,383	1.82	4.27
Newark	167	1,265	13	9,500,000	279,203	2,597	8,822	0.93	3.16
Paterson	125	496	25	5,000,000	144,943	1,318	3,836	0.91	2.65
Trenton	111	340	33	5,550,000	82,609	1,154	2,624	1.40	3.18

* Layoffs are projected for Trenton and Irvington based on mayors' statements. The layoff number for Camden is adjusted to account for the rehiring of 50 police officers.

** Savings are estimated for Camden, Irvington Twp., and Trenton. City savings are about half the full cost of police officer payroll expenditures because cities forego matching funds when police officers are laid off.

SOURCES FOR LAYOFF DATA: NJ.com ("Camden struggles with lack of manpower due to police, firefighter layoffs," Jan. 18, 2011), The Associated Press (""Mass police, firefighter layoffs begin in Camden," Jan. 18, 2011), USA TODAY ("Police layoffs make crime-plagued Camden all the worse," Feb. 15, 2011), Courier-Post ("Camden, N.J., to rehire 50 police, 15 firefighters," March 17, 2011), The Star-Ledger ("Irvington sending layoff notices to 20 cops, 10 firemen," April 9, 2010 and "Irvington police force to be cut by 20 percent," March 11, 2011), NJ.com/The Star-Ledger ("Newark finalizes 167 police layoffs after union refuses Booker's plea to return to negotiating table" Nov. 30, 2010), The Record ("Paterson police say special divisions, investigations could be impacted if layoffs proceed," Feb. 23, 2011), CBS New York.com ("Fears Rise As Paterson, N.J. Police Force Lays Off 125 Officers, Mayor Jones Defiant; 18 Guardian Angels Brought In To Help," April 18, 2011), The Times of Trenton ("Trenton police react harshly to Mayor Mack's layoff plan," May 20, 2011).

SOURCE FOR POPULATION AND CRIME DATA: U.S. Department of Justice, Federal Bureau of Investigation, Criminal Justice Information Services Division, "Crime in the United States, 2009," Table 8, New Jersey, Offenses Known to Law Enforcement by State by City, 2009; http://www2.fbi.gov/ucr/cius2009/data/table_08_nj.html.

Trenton, Newark, and Paterson. They experience much higher rates of crime than most areas elsewhere in the state, which has a relatively low violent crime rate of 0.31% and a property crime rate of 2.08%. The five cities had violent crime rates between nearly three and more than seven times higher then the state rate. Without a sizeable tax base and ratables (properties that generate tax income for local governments), high crime cities are greatly dependent on state and federal support to provide services, including policing. As a consequence of the substantial New Jersey state budget reductions in 2010 and 2011, these cities encountered large budget deficits. Whereas most New Jersey municipalities were able to avoid police layoffs through a round of concession bargaining with the police unions, these cities had such large budget gaps that their focus shifted to both layoffs and concessions.

The current and projected police force reductions range from 13% in Newark to 36% in Camden. Newark laid off 167 police officers, while Camden initially laid off 163 police officers, but was able to rehire 50 of them using PILOT money. The average cost of a senior police officer with benefits is approximately $110,000 per year in New Jersey; however, many cities do not pay the full cost of a police officer, which is often subsidized by state and federal matching grant programs. So, when an officer is laid off the city loses the subsidy and only realizes approximately half of the savings in salary and benefits.

As shown in Table 1, while Newark leads the state in all major crimes, when adjusted for population, Camden and Irvington have much higher rates of both violent and property crime than Newark. The current level of seven major FBI-indexed crimes in the five high-crime cities with layoffs and the projected increases in those crime categories are shown in **Table 2**.

The last row of the first section of Table 2 displays the impact of a 1% reduction in police staffing on each major

TABLE 2

Major crimes in five high-crime New Jersey cities in 2009 and projected crime increases arising from police layoffs

Incidence of crimes in 2009

City/town of police dept.	*Murder and nonnegligent manslaughter*	*Forcible rape*	*Robbery*	*Aggravated assault*	*Burglary*	*Larceny-theft*	*Motor vehicle theft*
Camden	34	60	766	1,020	1,035	2,251	649
Irvington Twp.	17	21	479	499	621	1,102	660
Newark	80	68	1,319	1,130	1,947	3,781	3,094
Paterson	15	28	631	644	1,241	1,966	629
Trenton	17	26	512	599	824	1,399	401
Estimated impact of 1% decrease in police officers on crime	Homicide 0.927	Rape 0.17	Robbery 0.592	Serious assault 0.292	Burglary 0.404	Larceny 0.103	Vehicle theft 0.44

Projected increase in crimes from layoffs

City/town of police dept.	*Murder and nonnegligent manslaughter*	*Forcible rape*	*Robbery*	*Aggravated assault*	*Burglary*	*Larceny-theft*	*Motor vehicle theft*
Camden	11	4	162	106	149	83	102
Irvington Twp.	4	1	69	35	61	28	71
Newark	10	2	103	44	104	51	180
Paterson	4	1	94	47	126	51	70
Trenton	5	1	99	57	109	47	58
*Annual crime increase**	34	9	527	289	549	260	481

* Rows may not add up to actual annual crime increase totals due to rounding.

SOURCES: Data on incidence of crimes comes from U.S. Department of Justice, Federal Bureau of Investigation, Criminal Justice Information Services Division, "Crime in the United States, 2009," Table 8, New Jersey, Offenses Known to Law Enforcement by State by City, 2009; http://www2.fbi.gov/ucr/cius2009/data/table_08_nj.html.. Estimated increases in crime are calculated based on data from Paul Heston's 2010 Rand Institute report, "Hidden in Plain Sight: What Cost-of-Crime Research Can Tell Us About Investing in Police" (Occasional Papers, OP-279).

crime, according to Heston's (2010) calculations based on social research studies. He averages estimates from five major quasi-experimental studies using a process known as meta-analysis. We use those combined impact estimates as our baseline measures in our cost-benefit calculations, of the effects of police layoffs on crime. For example, the 0.927 combined impact reported for homicide in Table 2 means that, in a typical department, we expect that a 1-percent decrease in the number of sworn officers would lead to a 0.927 increase in the number of homicides in that department's patrol area. The presence of police has apparently the greatest impact on homicides and robberies and the least influence on rapes and larcenies.

The bottom section of the table displays the results of calculations for each type of crime that multiply the percent of police laid off by the current crime level by the police layoff impact measure to determine the expected increased levels of major crimes in each city arising from their police layoffs. In total, across the five cities, we can expect 34 more murders, nine more forcible rapes, 527 more robberies, 290 more aggravated assaults, 549 more burglaries, 260 more larcenies, and 479 more motor

vehicle thefts as a result of police layoffs. According to these calculations, Camden can expect the greatest growth in violent crime and the property crimes of burglary, and larceny, while Newark can expect the largest increase in vehicle thefts arising from the reduction in police force levels.

These estimated increases in major crimes in the five cities enable us to determine how much these crime increases will cost the victims and their families, residents and the property owners, and businesses in the respective cities. Social science research typically differentiates between the tangible and intangible costs of crime. Tangible costs involve direct financial costs to individuals, businesses, or governments from out-of-pocket expenditures or lost earnings. These are easier to capture in property crimes than many violent crimes; almost all costs for burglary, larceny, and motor vehicle theft are tangible costs.

Intangible costs involve diminished quality of life resulting from fear of crime, the psychological after-effects of being victimized, and the declines in property valuations or business viability. Not surprisingly, intangible costs are

TABLE 3

Costs to five New Jersey cities for increased crime arising from police layoffs, by major crime category

Annual total costs to the community

City/town of police dept.	Murder and nonnegligent manslaughter ($8,649,216 per crime)	Forcible rape ($217,866 per crime)	Robbery ($67,277 per crime)	Aggravated assault ($87,238 per crime)	Burglary ($13,096 per crime)	Larceny-theft ($2,139 per crime)	Motor vehicle theft ($9,079 per crime)
Camden	$97,175,006	$792,153	$10,875,176	$9,262,067	$1,951,999	$176,784	$924,176
Irvington Twp.	33,102,156	188,890	4,633,132	3,087,024	797,926	58,963	640,303
Newark	84,678,354	332,486	6,935,201	3,800,082	1,359,916	109,972	1,631,687
Paterson	30,309,312	261,351	6,333,533	4,134,307	1,654,703	109,159	633,242
Trenton	44,498,919	314,381	6,657,365	4,981,492	1,423,283	100,626	522,973
Total cost increases	$289,763,747	$1,889,260	$35,434,407	$25,264,972	$7,187,827	$555,504	$4,352,381

Annual tangible costs to the community

City/town of police dept.	Murder and nonnegligent manslaughter (24% of total cost)	Forcible rape (10% of total cost)	Robbery (18% of total cost)	Aggravated assault (36% of total cost)	Burglary (85% of total cost)	Larceny-theft (100% of total cost)	Motor vehicle theft (95% of total cost)
Camden	$22,836,126	$75,254	$1,957,532	$3,334,344	$1,659,199	$175,900	$877,967
Irvington Twp.	7,779,007	17,945	833,964	1,111,329	678,237	58,668	608,288
Newark	19,899,413	31,586	1,248,336	1,368,029	1,155,928	109,422	1,550,103
Paterson	7,122,688	24,828	1,140,036	1,488,351	1,406,498	108,613	601,580
Trenton	10,457,246	29,866	1,198,326	1,793,337	1,209,791	100,123	496,824
Total tangible cost increases	$68,094,480	$179,480	$6,378,193	$9,095,390	$6,109,653	$552,726	$4,134,762

SOURCES: Paul Heston, "Hidden in Plain Sight: What Cost-of-Crime Research Can Tell Us About Investing in Police," Rand Institute Occasional Papers OP-279, 2010; Michael T. French, Kathryn E. McCollister, and David Reznik, "The Cost of Crime to Society: New Crime-Specific Estimates for Policy and Program Evaluation," paper presented at the Addiction Health Services Research Annual Meeting, Philadelphia, Pa., 2004; Ted R. Miller, Mark A. Cohen, and Brian Wiersema, "Victim Costs and Consequences: A New Look," U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, 1996.

inherently more difficult to measure (Heston 2010). However, intangible costs are important to capture because they can represent a substantial component of the total cost of a crime, particularly a violent crime, whose costs are mostly intangible. Among the studies that do differentiate between tangible and intangible costs, despite methodological differences, intangible costs are much larger for violent crimes, intangible costs are borne primarily by victims, suggesting that the majority of violent-crime costs are shouldered by the victims.

Focusing solely on tangible costs is likely to undervalue the benefits of crime control policies that primarily deter violent crime (Heston 2010). For example, a Justice Department study (Miller, Cohen, and Wiersema 1996) estimated that crime costs $105 billion annually in victim medical costs, lost earnings, and public program costs related to victim assistance (in 1993 dollars). The study noted that these tangible losses do not account for the pain, suffering, lost quality of life, and other intangible costs to victims of crime, which add an estimated $350 billion annually to the cost of crime. Furthermore, intangible costs extend beyond the victims of crime to other people as fear of crime alters their lives in multiple costly ways.

In **Table 3**, we calculate the additional costs of each major FBI indexed crime in the five major cities. The cost of each crime type was estimated by Heston (2010) based on the major cost-of-crime studies. The dollar values were adjusted to 2007 dollars, meaning that the estimated are understated because they have not been readjusted to 2011 dollars. Homicides are the most costly crimes, with an average cost of more than $8 million per homicide. (See for example of the valuation of a life in Viscusi 2008). The research literature suggests that lost quality of life for victims represents approximately 60 percent of homicide costs, lost victim earnings represent 30 percent, criminal justice system costs represent 6 percent, lost offender productivity represents 3 percent, and victims' medical expenditures and property losses represent 1 percent of homicide costs (Heston 2010; Cohen and Piquero 2009; and Miller, Cohen, and Wiersema 1996).

As the table indicates, the cost of a crime varies by type. And, even though the estimated costs to the community per major crime represent the best research currently available, they are estimates and therefore uncertain. Consequently, the actual future costs of crime could be considerably more or less than estimated. The top section of Table 3 provides the total costs of major crimes and the bottom section provides only the tangible costs to produce an extremely conservative estimate of the costs of crime. Because they eliminate intangible costs, the tangible cost estimates suggest that forcible rape and robbery are relatively costless crimes when we know that they can be profoundly harmful and life-changing. This reveals the weakness of focusing only on tangible costs, since it seriously understates the cost of violent crime.

Table 4 depicts the final step of the cost-benefit analysis of police reductions, subtracting the predicted annual increased costs of crime in each of the cities from the budget savings achieved through the layoffs of police officers.

In the top section, we provide our best estimates for the costs and benefits of police benefits. The estimated total annual cost arising from increasing crime attributable to police layoffs in the five cities is $364,448,096, while the cities' estimated budgetary savings are $28,250,000. The estimated net losses for the five cities is $336,198,096. As the research suggests, most of these costs of these additional, preventable crimes will be borne by the victims, not the cities.

The greatest cost to the community, crime victims, families, residents, property owners, and businesses will be borne by Camden, which faces an estimated $121,157,359 in tangible and intangible costs of crime. Because the city was able to save an estimated $5,650,000 in its budget, the net loss for the residents of Camden attributable to police layoffs is $115,507,359. While policy layoffs are an understandable action for a city with limited fiscal options, from a social or economic perspective, the layoffs are irrational.

The figures reported in the bottom section of Table 4 represent an extremely conservative cost-benefit analysis. In this "sensitivity analysis," we calculate the greatest possible city budgetary benefits from police layoffs and we report only the tangible costs of crime. As discussed earlier, counting tangible costs only greatly understates the costs of violent crimes. Nonetheless, even using these extreme estimates, all cities except Paterson face net economic losses that are 51 percent greater than their budgetary savings.

TABLE 4

Annual net losses from police layoffs in five high-crime New Jersey cities

Best-estimate cost-benefit analysis

City/town of police dept.	*Cost of police layoffs*	*Cost savings from layoffs*	*Net community losses from layoffs*
Camden	$121,157,359	$5,650,000	-$115,507,359
Irvington Twp.	42,508,394	2,550,000	-39,958,394
Newark	98,847,698	9,500,000	-89,347,698
Paterson	43,435,607	5,000,000	-38,435,607
Trenton	58,499,038	5,550,000	-52,949,038
Total	$364,448,096	$28,250,000	-$336,198,096

Sensitivity analysis (assuming greatest possible savings and eliminating intangible costs)

City/town of police dept.	*Tangible costs of police layoffs**	*High-end estimate of cost savings from layoffs***	*Most conservative estimate of losses from layoffs*
Camden	$30,916,322	$12,430,000	-$18,486,322
Irvington Twp.	11,087,437	5,610,000	-5,477,437
Newark	25,362,818	18,370,000	-6,992,818
Paterson	11,892,594	13,750,000	1,857,406
Trenton	15,285,512	12,210,000	-3,075,512
Total	$94,544,684	$62,370,000	-$32,174,684

* Intangible costs, which include diminished quality of life resulting from the suffering that often follows a violent crime, and the declines in property valuations or business viability arising from the fear of crime, are not included.

** This estimate includes the full salary and benefits savings as if they accrue to the city; for the most part, they do not since the city is often foregoing matching funds.

SOURCES: Author's analysis of data in Tables 1 and 3.

Police layoffs are economically irrational in high crime cities

From a social or economic perspective, the police layoffs are irrational since the costs that they impose are 12.9 times greater than the costs they save. However, the five cities included in this paper have limited financial resources. Their tax bases are inadequate. When they impose higher taxes, businesses threaten to flee. Their number of properties that generate tax income for local governments (ratables) are relatively small in relation to their population, partly due to the investment deterrent effects of higher crime rates. The cities tend to have high proportions of citizens who live at or below the poverty line, depend on city and social services, and are often unable to contribute to the financial resources of the city. Frequently, the need to attract and retain businesses prompts these cities to offer substantial tax abatements, which deprives them of needed revenue while they are expanding their obligations to provide city services.

Starting in 2008, state support to these high-crime cities has fallen significantly. For example, state aid to Newark declined from $153.3 million in 2008 to $91.2 million in 2010 (Booker 2010), a drop of more than 40% in two years, excluding major cuts to public education. To offset its limited real estate ratables, Newark historically collects a unique but declining payroll tax as Newark's private and public payrolls shrink; this tax generated $35 million in 2010. The state government's withdrawal of economic support as it managed its own fiscal crisis coupled with the termination of the federal government's

stimulus program plunged Newark into a fiscal crisis. The mayor sought dramatic spending reductions, and the negotiations with the police union for wage and benefit concessions eventually broke down, resulting in the layoff of 167 police officer. While the layoffs may have been a necessity for the city of Newark, they were counter-productive from the standpoint of the welfare of the its residents and its plans for revitalization. The projected annual costs to the community are much larger ($98.8 million) than the savings ($9.5 million) to be achieved by the city from the police layoffs.

The cost-benefit analysis developed in this research demonstrates that it is irrational to lay off police officers in high-crime cities. Prospective costs dwarf the cities' budgetary savings. Nonetheless, when state and federal governments withdrew economic resources, cities face fiscal choices that are irrational from a social or economic standpoint, but inevitable from a fiscal perspective. The more economically fortified entities in state and federal government must seek alternatives to withdrawing local resources that ensure that public safety is protected even during the most difficult fiscal times.

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References

Booker, Corey. 2010. "Mayor's Commentary on 2010 Budget"; http://www.ci.newark.nj.us/government/mayor_booker/mayors_commentary_on_2010_budget.php

City of Newark. 2010. "Adopted Budget 2010"; http://www.ci.newark.nj.us/government/city_departments/department_of_administration/2010_introduced_budget.php

Cohen, Mark A., and Alex R. Piquero. 2009. "New Evidence on the Monetary Value of Saving a High Risk Youth." *Journal of Quantitative Criminology*, Vol. 25, No. 1, pp. 25–49.

Heston, Paul. 2010. "Hidden in Plain Sight: What Cost-of-Crime Research Can Tell Us About Investing in Police." Rand Institute. Occasional Papers OP-279

Miller, Ted R., Mark A. Cohen, and Brian Wiersema. 1996. "Victim Costs and Consequences: A New Look." Washington, D.C.: U.S. Department of Justice, Office of Justice Programs, National Institute of Justice.

New Jersey, Offenses Known to Law Enforcement by State by City, 2009; http://www2.fbi.gov/ucr/cius2009/data/table_08_nj.html

U.S. Department of Justice, Federal Bureau of Investigation, Criminal Justice Information Services Division. 2009. "Crime in the United States, 2009" Table 8

Viscusi, W. Kip. 2008. "Value of Life," in Steven N. Durlauf and Lawrence E. Blume, eds., The New Palgrave Dictionary of Economics, 2nd ed., Basingstoke, Hampshire, and New York: Palgrave Macmillan.