

Putting a Value on Crime Analysts

Considerations for Law Enforcement Executives

MARCH 2014

Carl Matthies • Tina Chiu

COST-BENEFIT ANALYSIS UNIT

cost-benefit knowledge bank
for criminal justice

CBKB

A project of the Vera Institute of Justice



BJA
Bureau of Justice Assistance
U.S. Department of Justice

FROM THE BJA DIRECTOR

The Bureau of Justice Assistance (BJA) serves as a national leader in the implementation of evidence-based criminal justice programs and building the capacity for the field to conduct this work. One of the major goals of BJA is the “integration of evidence-based, research-driven strategies into the day-to-day operations of BJA and the programs BJA administers and supports.” One way BJA supports this goal is by partnering with a number of organizations to enhance the capability of law enforcement agencies to collect, analyze, and interpret data to develop strategies to fight crime and increase public safety.

Successful data-driven strategies such as hot-spots policing, problem-oriented policing, and intelligence-led policing use the work of crime analysts to reduce crime by focusing resources on high-crime places, high-risk offenders, and repeat victims. This analytical work is essential to the success of these strategies and has also become central to CompStat-like decision making and accountability systems adopted by police agencies across the country.

BJA is involved in a number of efforts to develop and enhance the use of crime analysis. BJA provides assistance through our Crime Analysis on Demand program, which focuses on enhancing law enforcement capabilities to analyze and use data to make informed decisions, respond effectively, and prevent crime. We are also in the process of identifying, assessing, and leveraging lessons learned from existing Crime Analysis Centers, which will be used to develop standards and implementation strategies that jurisdictions throughout the country can replicate to improve efficiency and effectiveness. BJA staff and our partners are also in the process of synthesizing evidence of crime-analysis best practices, developing plans to provide law enforcement executives with the assistance to integrate crime analysis into their decision making, and providing training to support effective communication between executive staff and their organizations’ analysts.

BJA is excited to have partnered with the Vera Institute of Justice to develop this important document for the field. We hope this paper provides information agencies can use as they seek to develop and enhance their crime-analysis work and ultimately their public safety efforts.



Denise O'Donnell
Director
Bureau of Justice Assistance
U.S. Department of Justice

FROM THE VERA INSTITUTE DIRECTOR

Crime analysis has become an essential tool in law enforcement’s efforts to enhance public safety, identify emerging trends, allocate resources, and plan crime-prevention strategies. But like other government agencies, police departments are under pressure to get the biggest return possible when they spend taxpayers’ dollars and need to make smart budget decisions.

So how do police executives justify spending on crime analysts, whose jobs are often civilian positions? As police departments tackle this question, their leaders may need to explain what kind of return they would expect from investing in an analyst’s position rather than another alternative, such as a sworn officer.

Vera has worked with law enforcement and other government agencies for decades to reduce crime and promote fair, effective policing. In recent years, Vera’s Cost-Benefit Analysis Unit (CBAU) has examined the costs and benefits that justice programs and policies generate. After members of CBAU’s staff prepared an earlier version of this paper for a meeting of the BJA’s Law Enforcement Forecasting Group, we were pleased that its leaders asked Vera to develop this document so it can be shared more widely. We believe it will be useful to law enforcement executives who are considering cost-benefit analysis as a way to help answer critical questions about how to spend budget dollars wisely.

We are grateful for the opportunity to collaborate with BJA and further this discussion and we look forward to an ongoing dialogue with our colleagues in law enforcement.



Nicholas Turner
President and Director
Vera Institute of Justice

Contents

- 4 Introduction
- 4 A brief overview of cost-benefit analysis
- 5 Explaining the value of crime analysts
- 11 Conducting a cost-benefit analysis
- 13 Summary and next steps
- 15 Appendix: What budget officials want to know

Introduction

Crime analysis has become a common feature of U.S. law enforcement agencies. According to a 2008 Police Executive Research Forum (PERF) survey, 89 percent of responding agencies reported having staff whose primary or secondary duty was crime analysis, and the number of analysts has likely increased since then.¹

In a 2008 survey, 89 percent of responding agencies reported having staff whose primary or secondary duty was crime analysis.

But in light of ongoing budget woes, elected officials are asking law enforcement executives to explain how civilian positions, especially those of crime analysts, contribute to the goals and mission of policing. Law enforcement professionals want to know how they can articulate the value of crime analysts, and whether cost-benefit analysis (CBA) can help demonstrate a return on investment for these positions. To put the bottom line up front: the field has not provided many cost-benefit studies of crime analysts to date.

This paper offers guidance for police executives grappling with this issue. The first section gives an overview of the steps involved in CBA and the challenges of using this technique. The second section poses questions about crime analysts that police executives need to answer as part of conducting a CBA. The final section of the paper discusses key considerations when performing a CBA of crime analysts.

A brief overview of cost-benefit analysis

CBA is a rigorous and systematic accounting of the pros and cons of a decision. The hallmark of CBA is that benefits and costs are both expressed in monetary terms, so that investments designed to achieve different outcomes can be compared. For example, a law enforcement agency might use CBA to help decide whether to invest in a new computer-aided dispatch system or hire additional officers.

CBA involves the following steps:²

1. **ASSESSING THE IMPACTS OF THE INVESTMENT.** This step typically requires a thorough evaluation of the investment, whether it is in a program, a policy, personnel, or a piece of equipment. This can be the most problematic step in a CBA for two reasons. First, it can be difficult to demonstrate a causal link between investments and outcomes. Second, unless evaluations of similar investments have already been made in other jurisdictions, analysts must assess impacts after the fact. This is why agencies often conduct pilot studies or trial runs to evaluate investments before making a full-scale commitment.

2. **MEASURING THE COSTS OF THE INVESTMENT.** Adding up the full cost of investments might seem like a straightforward process, but some costs are easily overlooked. The hiring of each additional officer, for example, entails not only an officer's starting salary, but also recruitment costs, applicant processing costs, background investigation, academy training, equipment, support personnel, and overtime. CBA takes such costs into account, as well as ongoing costs. CBAs also include the costs borne by all *perspectives*, that is, relevant parties. Among these costs are budgeted expenditures, fees, and use of resources as well as harms or burdens caused by an investment's negative outcomes.
3. **MEASURING THE BENEFITS OF THE INVESTMENT.** CBA defines benefits broadly. Unlike cost analysis and fiscal-impact analysis, which examine how initiatives affect an agency's ledger, CBA attempts to capture the benefits for all perspectives. The perspective of victims plays an important role in CBAs of crime-reduction investments. Cost-benefit studies frequently account for the social benefit of reductions in crime by using economists' estimates of the "price" paid by crime victims in the form of medical bills, forgone income, and pain and suffering.
4. **COMPARING COSTS AND BENEFITS.** CBA looks at short- and long-term impacts of an investment. An investment's net benefits are computed by summing the costs and the benefits over the duration they are predicted to occur.

A common misperception about CBA is that the results can be quickly obtained by plugging a few inputs into a standard formula, like using an amortization calculator. In fact, CBA typically involves numerous inputs that take time and effort to gather. Drug courts, for instance, have been extensively studied, and their costs and benefits are well-characterized.³ Yet CBA results can vary dramatically from one court to another, not only because of variability in program implementation and local costs, but also in how impacts are estimated.

The next section reviews some of the inputs needed for conducting a CBA of a crime-analyst position, particularly in relation to costs and how crime analysis is carried out in your agency. The third section, "Conducting a cost-benefit analysis," describes in greater detail the challenges of determining a crime analyst's impact, along with possible evaluation strategies.

A common misperception about cost-benefit analysis is that the results can be quickly obtained by plugging a few inputs into a standard formula.

Explaining the value of crime analysts

Virtually everything law enforcement agencies do is intended to contribute to public safety. Small wonder, then, that when asked why a particular policy,

practice, or technology is necessary, police officials often respond that it enhances public safety, without providing specifics about how, how much, or compared to what. But in the current economic climate, further justification is often required.

In making the case for a crime analyst, law enforcement leaders should thoroughly explain the answers to these questions:

1. What is the purpose of having a crime analyst?
2. What are the costs associated with a crime-analyst position?
3. What, if any, are the feasible alternatives to having a crime analyst on staff?

The qualitative and quantitative answers to these questions serve a number of purposes. First, this information can help construct a full-fledged evaluation and CBA of a crime-analyst position. Second, the details will act as technical documentation for anyone who wants to “look under the hood” to see how the CBA was conducted. And third, the answers may be sufficient to clarify to elected officials and budget staff the value of crime analysts.

1. WHAT IS THE PURPOSE OF HAVING A CRIME ANALYST?

Don't assume that budget hawks or elected officials know much about what a crime analyst does and how that function can contribute to a law enforcement agency's public safety mission. Many officials won't have more than a basic grasp of police work, let alone crime analysis. Step one in defending a crime-analyst position, therefore, is clearly describing what your agency is buying.

The value of integrating crime analysis in a police agency is “to increase the effectiveness of [a department's] crime reduction strategies and direct limited resources in controlling, reducing, and preventing crime and disorder,” according to Taylor and Boba.⁴ In general, crime analysts help police make sense of the deluge of data collected in the course of their work, so that they can respond more swiftly and appropriately to emergent public safety issues. More specifically, describe the following:

- the goals of the crime analyst or crime-analysis unit;
- the activities and tasks that constitute the crime analyst's daily routine;
- the crime analyst's “customers”;
- the crime analyst's role in providing information and analysis (e.g., proactive or reactive); and
- the process that crime analysts use to disseminate data.⁵

Agencies that already have a mission statement and objectives for their crime-analysis unit or division, a job description for the crime analyst, or crime analysis work products, can use those materials to help describe the crime analyst's roles and responsibilities. Unfortunately, crime analysts are sometimes added to staff without clearly articulating how they will be used. If that

Don't assume that budget hawks or elected officials know much about what a crime analyst does.

describes your agency, you will need to gather information through direct observation; interviews with crime analysts, staff they interact with, and human resources personnel; review of work products; and, possibly, comparisons to other jurisdictions' analysts or industry standards.

The resulting profile will indicate what role your agency's crime analyst fulfills—tactical, operational, strategic, or some combination of the three (see the sidebar “Types of Crime Analysis”). Much, if not most, crime-analysis work is *tactical*—that is, it is descriptive and counts or summarizes crime more than analyzing it. Tactical analysis can add value to police operations by increasing situational awareness. An example of tactical analysis is a chart showing week-to-week fluctuations in the number of felony offenses or arrests.

Crime analysts may also have an *operational* role, assisting law enforcement agencies with allocation of resources and planning crime-reduction activities.⁶ The operational role guides leaders in setting near-term policing priorities. Identifying “hot spots” of criminal activity to guide officer deployments is a prime example of operational analysis.

Crime analysts can also play a *strategic* role, providing analysis geared toward long-term planning and problem solving. Strategic analysis usually informs command staff decisions and requires more-advanced analytical skills and tools. An analyst working in a strategic capacity might examine trends in critical incident response time to help decision makers determine whether the department needs an additional station.

These roles differ but are not mutually exclusive. Consider how crime analysis might be used in the context of problem-oriented policing (POP). Participants at a POP meeting might refer to summary statistics in a *tactical* crime analysis report. They might hear a crime analyst report on the latest crime hot spots identified as part of an *operational* analysis. And they might have a discussion, informed by *strategic* crime analysis, about moving from POP to a paradigm like predictive policing. (See “Operational and Strategic Crime Analysis: Los Angeles Police Department’s Operation LASER” for an example of how operational and strategic analysis can be used together.)

For crime analysts to be used optimally, an agency should have an adequate *supply* of and *demand* for crime-analysis products. On the supply side, agencies should be attentive to analysts’ training and equipment needs. Without expertise or the tools of the trade, the supply is diminished.⁷ In terms of *what* is supplied, crime analysis products should be tailored to specific audiences. Analysts should generate products that apply to the responsibilities and needs of line-level officers, first-line supervisors, managers, and commanders, for example. Officers might need information about last week’s crime patterns in their precinct, and commanders might be most concerned about annual or semiannual crime patterns throughout their jurisdiction.

On the demand side, if managers don’t understand or appreciate how crime analysis assists their agency, the department probably won’t use this resource effectively. Agency leaders should stress the importance of crime analysis regularly, through actions as well as words. This helps foster an institutional culture

TYPES OF CRIME ANALYSIS

Tactical: Descriptive statistics and summary information intended mainly for patrol officers and the public

- Weekly crime/arrest counts
- Auto theft VIN/license-plate lists
- Year-to-year crime comparisons
- Suspect bulletins
- Gang territory maps

Operational: Analysis to identify problems, direct resources, and show results; intended mainly for midlevel management

- Hot-spots analysis: crime density mapping
- Correlation analysis: neighborhood features associated with crime, such as poor lighting
- Analysis of incident data to reveal commonalities, identify serial cases
- CompStat-style week-to-week results assessment

Strategic: Analysis for long-term planning at the command-staff level

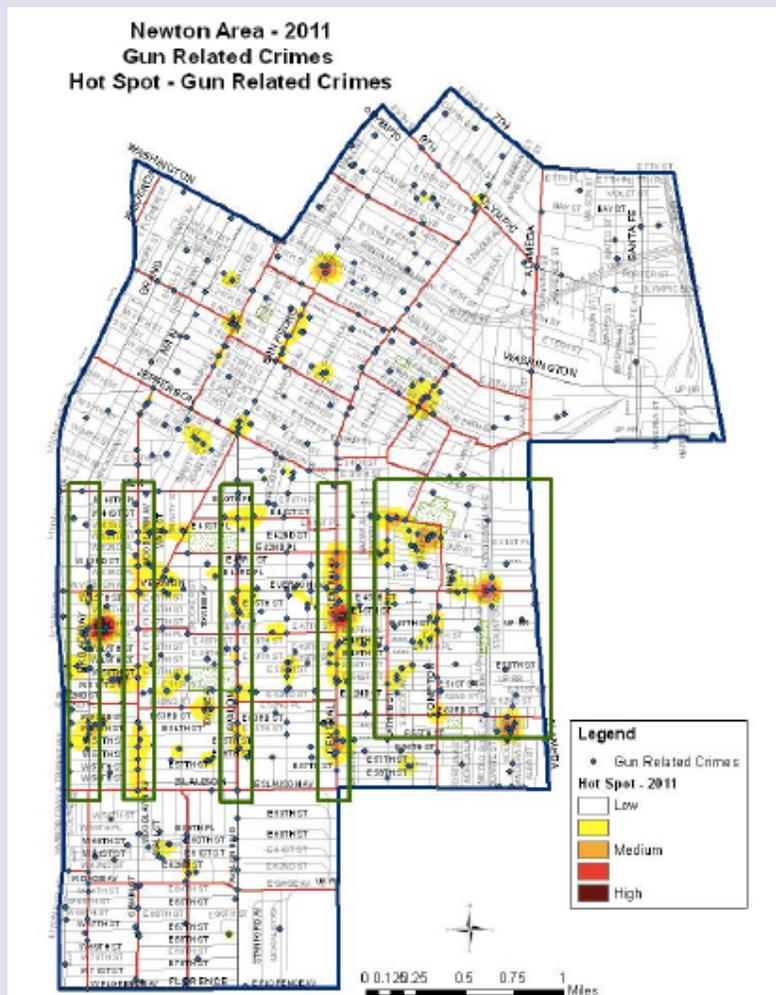
- Rigorous evaluation of crime-control programs
- Workforce optimization

OPERATIONAL AND STRATEGIC CRIME ANALYSIS: THE LOS ANGELES POLICE DEPARTMENT'S OPERATION LASER

In September 2011, the Los Angeles Police Department's Crime Intelligence Detail (CID) launched the Los Angeles Strategic Extraction and Restoration (LASER) program in Newton Division, an area of the city long plagued by gangs and gun violence. Based on the locations of reported gun-related crime from 2006-2011, the crime analyst identified five hot-spot corridors within the division (see map).

Concurrently, a pair of sworn officers in CID gathered intelligence from crime and arrest reports, release from custody forms, traffic citations, and criminal histories to generate what are called Chronic Offender Bulletins for distribution to patrol, detectives, and watch commanders. Over the next 16 months, officers spent 13,326 extra minutes patrolling the corridors, arresting 112 out of 189 chronic offenders. A time-series analysis (that is, an analysis of data collected at uniform time intervals) indicated that the combination of place-based and offender-based efforts reduced Part I violent crimes by approximately two offenses per month.

LASER illustrates the relationship between operational and strategic crime analysis, and highlights the possibilities for collaboration in crime analysis. CID created hot-spots and offender bulletins with the aid of a private firm's software (Palantir), while a consulting firm (Justice & Security Strategies) provided the impact analysis, which persuaded the Los Angeles Police Department to expand the program to four other divisions.



Source: Craig D. Uchida, Marc Swatt, David Gamero, Jeanine Lopez, Erika Salazar, Elliott King, Rhonda Maxey, Nathan Ong, Douglas Wagner, and Michael D. White, "Los Angeles, California Smart Policing Initiative: Reducing Gun-Related Violence Through Operation LASER" (Washington, DC: Bureau of Justice Assistance, 2012), 5.

in which everyone from the rank-and-file to the top brass values high-quality data and objective analysis.

An agency's organizational structure or practices may render crime analysis an exclusive tool for one bureau within a department. Avoid such compartmentalization as much as possible. Agencies should instead have a formal system, such as CompStat, that allows supply and demand to meet routinely, so that crime-analyst services can be integrated into the departmental mission. A team of mid-level sworn and civilian personnel is ideal for shaping a crime-analysis unit's role in the department.

Knowing whether your crime analyst plays a tactical, operational, or strategic role—or some combination—will help you better communicate the purpose of the position. And describing how your agency creates a demand for and uses what your crime analyst supplies will show how you are maximizing the use of crime analysis.

2. WHAT ARE THE COSTS ASSOCIATED WITH A CRIME-ANALYST POSITION?

Once officials understand the goals of having a crime analyst and what that position does for your agency, they'll want to know how much the position costs. Budget staff will probably have basic information about salary and benefits, but employing a crime analyst entails additional costs. Know what they are and convey that information to interested parties (see sidebar "Costs of Having a Crime Analyst").

Crime analysis requires hardware and software, so take into account the total life-cycle costs of equipment and technology, including warranties and service contracts.⁸ Like most employees, crime analysts need ongoing training, education, and professional development—some or all of which the agency may subsidize. The time other staff members dedicate to managing and training a crime analyst is also technically a cost. Last, give serious consideration to the opportunity cost of a crime analyst. This is not an additional cost, but another way of conceptualizing the cost, that is, what other things could have been purchased with the money spent to support a crime analyst.

Candor about the full cost of investing in crime-analyst positions may seem like a double-edged sword. If a position is viewed as expensive, it may appear more attractive to cut or forgo. But if a position is considered "cheap," it may appear unimportant and disposable. And if a position actually is cheap—because the salary is low, the equipment is obsolete, and opportunities for professional development and advancement are scarce—an agency may bear hidden costs associated with high turnover. Indeed, high turnover has historically been a problem, particularly among civilian crime analysts.^{9,10} A low-cost position may also signal that a crime analyst does not have the right tools at her disposal to do the job well and not that the position is a "bargain." A competitive salary, up-to-date technology, and opportunities for growth signal the importance of the crime-analyst position to the agency.

A full accounting of what your agency spends on crime analysts is better in

COSTS OF HAVING A CRIME ANALYST

Wage and benefits

- Base salary plus any overtime
- Medical, dental, life insurance
- Pension/retirement plan
- Tuition/daycare/transportation

Equipment

- Unit costs for hardware and software
- Support contracts
- Component replacement/upgrades

Support staff

- Time cost of other department employees who train and supervise crime analyst

Professional development

- Continuing education
- Certifications/proficiency tests
- Participation in professional organizations

OR

Opportunity cost: what the department could purchase instead for the cost of a crime analyst

terms of transparency and of justifying your investment. Determined budget staff will ask for this data, so be prepared to supply it. Use the opportunity strategically to explain how your costs are appropriate, given the analyst's role in your agency.

3. WHAT, IF ANY, ARE THE FEASIBLE ALTERNATIVES TO HAVING A CRIME ANALYST ON STAFF?

Budget officials will want to know whether your agency can get the benefits of crime analysis by means other than having a crime analyst on staff. Possible alternatives include having sworn officers perform crime-analysis tasks, sharing an analyst, or outsourcing the work. A number of factors may make those alternatives attractive, such as the size of your jurisdiction, your agency, and your agency's budget; the type and amount of crime in your jurisdiction; the culture of your organization; and the role and level of expertise of your crime analysts.

Budget officials are interested not only in the cost of an analyst, but also in what that amount represents and buys.

If crime analysis is largely an administrative function, an agency could, for instance, create a rotating position filled by properly trained officers on light duty. (Positions that perform purely tactical crime analysis, however, may soon become obsolete as those types of tasks become more automated.)

Sharing a crime analyst with other agencies may make sense if the primary public safety concern is regional crime. Agencies that need analysis for specific projects could hire consultants or collaborate with an academic institution or a professional organization for crime-analysis expertise.¹¹ Temple University's Center for Security and Crime Science has carried out crime-analysis projects for the Philadelphia Police Department; George Mason University's Center for Evidence-Based Crime Policy has done the same for law enforcement agencies in Northern Virginia, to name just two examples.

Budget officials and decision makers may ask whether these options are feasible and cost-effective. If you haven't considered sharing the position or outsourcing the function, review your answers to question 1 ("What is the purpose of having a crime analyst?") to help explain why hiring someone as part of your staff is preferable.

TYING THIS INFORMATION TOGETHER

The process of assembling information about what crime analysts do, how much they cost, and whether alternatives exist to having them on staff will provide some of the quantitative inputs and qualitative data needed for conducting a CBA, the focus of the next section.

Another benefit to this process is that the information may sufficiently explain to budget analysts and elected officials the value of crime analysts. Budget officials are interested not only in the cost of an analyst, but also in what that amount represents and buys. If you choose not to perform a CBA of your crime-analyst position, you can still use the answers to these three questions to address some typical questions budget analysts will ask.¹² For more information, see the appendix, "What budget officials want to know."

Conducting a cost-benefit analysis

CBA has been used to assess investments in law enforcement personnel. In separate studies, Paul Heaton of RAND Corporation and Jens Ludwig of the Brookings Institution synthesized economic research to estimate the monetary value of additional police in terms of crime reduction.^{13,14} Both concluded that investing in additional police is highly cost-beneficial, with the avoided cost of crime far exceeding the cost of officers' salaries, benefits, equipment, and training. This research exploited large increases in police-force strength (such as the COPS grants initiated during the Clinton administration), so the impact of additional officers was sizable enough to detect.

Doing a CBA of a specific law-enforcement position like a crime analyst is more complex. The first step necessary for conducting a CBA—measuring the effect of crime analysis on crime reduction—may be the most challenging. Many agencies don't connect crime analysts' work with outcomes in the units or departments they serve. About half of the agencies PERF surveyed in 2008 indicated that they had no feedback mechanism to communicate the impact of crime analysis efforts.¹⁵

Crime analysts' performance is also highly dependent on the work of others. They rely on officers to diligently collect accurate data for their studies. They also rely on staff, from line-level officers to commanders, to produce results by responding to their analyses with appropriate action. This is why a data-driven culture and a formal integration process like CompStat are important factors in the effective use of crime analysis. But these conditions can create other synergistic impacts. When such factors exist, what gets evaluated may be the resulting synergy, not crime analysis per se.

Examining the impact of crime analysts specifically—and not the overall impact of integrating crime analysis into other processes—could be done via randomized control trials (RCT) or quasi-experimental research designs. In theory, one could test crime analysts' impact by randomly assigning the division within a department or day of the week when officers receive crime analysis communications and comparing after a set time the difference in crime between the two groups. Although RCT provides the most convincing proof of efficacy, the approach may be unpalatable to law enforcement executives, who would be reluctant to intentionally deprive some residents of the benefits of a public safety tool. In addition, experts recommend that agencies integrate crime analysis into their functions for an important reason: much of its value stems from making sense of bits of information across divisions—or even jurisdictions—and over time. An evaluation design that disrupts that process could underestimate the true benefit of crime analysis.

It's also possible to compare crime before and after an agency hired a crime analyst. This kind of evaluation is more compelling if the change is measured relative to a similar jurisdiction that does not have a crime analyst. (In the jurisdiction with an analyst, calculate the difference in crime before and after

The first step necessary for conducting a CBA—measuring the effect of crime analysis on crime reduction—may be the most challenging.

Cost-benefit analysis is used to weigh options. Before beginning a CBA, specify which scenarios you are comparing.

the analyst's hiring. Then subtract from that estimate the difference in crime for the comparison jurisdiction over the same period.) This "difference-in-differences" approach assumes that the crime trend for both jurisdictions would have been the same if not for the crime analyst, an assumption that gains validity if the crime trends were similar in the years prior to hiring the analyst. Note that this method could also be used in reverse, to estimate the increase in crime after a crime-analyst position has been eliminated.

The difference-in-differences approach, unlike the RCT approach, does not manipulate policing to deduce the crime analyst's impact, but it has its own disadvantages. Given that most agencies have crime analysts, few jurisdictions are available as comparisons—and those that exist may not be truly comparable. A crime analyst may not be the only important difference between the agencies and the areas they serve; other law enforcement activities or unobserved community factors could affect the outcome of interest.

Another challenge is determining the proper scope of the CBA. If an agency can demonstrate that having a crime analyst has reduced crime significantly, the CBA can then translate that impact into monetary terms using avoided victimization costs from the economics literature.¹⁶ Knowing the types of crimes that have been avoided is essential, because the victimization costs of violent crimes far exceed those of less serious offenses like property crimes, especially when intangible costs are counted.¹⁷ Relative to the cost of a crime analyst, even a slight—but statistically meaningful—reduction in violent crime will generate substantial net benefits. A much larger drop would need to occur in property crime to achieve the same net benefit.

With that in mind, suppose an agency focuses its crime analyst on high-volume property offenses that follow regular or somewhat predictable patterns. An evaluation shows that crime analysis has brought about a large reduction in property crimes, but for the same period shows an uptick in a more serious crime like assaults. If a CBA ignores the increase in serious crimes as "outside the scope" of the crime analyst's work, it will also ignore the question of whether a larger public safety benefit could be achieved by investing in something that does reduce violent crime. Remember that CBA is used to weigh options. If the question is whether or not the agency should have a crime analyst, the answer in this situation might be yes—if the value of avoided property crimes outweighs the cost of having a crime analyst on staff. But if the question is whether the crime analyst should focus on property crimes, the answer is not so clear. Perhaps the crime analyst should be targeting more serious crimes, or perhaps the funding that supports the crime analyst should be spent on an initiative that does. Before beginning a CBA, specify which scenarios you are comparing.¹⁸

Now imagine that another agency has its crime analyst focus on violent crimes. An evaluation shows that crime analysis has been able to bring down violent crime, but there was also a single anomalous event, such as a mass shooting. Should the analyst be credited for helping reduce violent crime overall—except for one horrific outlier that, if counted, would drastically change

the CBA result? How should someone conducting a CBA assess which offenses are amenable to crime analysis and which are not? “Cherry picking” positive impacts and dismissing negative impacts will make readers skeptical of a study and its findings. The CBA should provide sound rationales for what is counted and what is excluded from its calculations and should document those decisions clearly. Otherwise, readers are unlikely to view the study as credible and objective.

Summary and next steps

The existing literature does not provide answers about the economic return of investing in crime-analyst positions. But before embarking on a full-fledged CBA, start by gathering comprehensive information about the following:

1. What is the purpose of having a crime analyst?
2. What are the comprehensive costs associated with a crime-analyst position?
3. What, if any, are the feasible alternatives to having a crime analyst on staff?

Having specific, even if qualitative, answers to these questions can help make a justifiable case for why a crime analyst is needed. A coherent, well-documented explanation may suffice for speaking with elected officials, budget officials, the public, and other stakeholders. The additional effort to conduct a rigorous CBA may not yield a more definitive or more persuasive answer as to whether crime analysts are good investments.

If the agency wants a comprehensive, quantitative economic analysis, give some thought to who will conduct (1) a robust evaluation to estimate the analyst’s impact on crime; and (2) the CBA that will be based on those results. Consider the pros and cons of conducting the studies in-house, performing them with a research partner, or commissioning the work. Not all evaluators will have experience in conducting CBAs; either look for evaluators who have done them or engage with one party to conduct the evaluation and another to perform the CBA.

Some decision makers may want assurance that the CBA has been conducted objectively, as well as assistance in understanding cost-benefit findings. One strategy to address both issues is to assemble a CBA working group or advisory body that includes members of your target audience—for instance, elected officials or their staff, budget officials, and other policy-makers or influencers. More exposure to how the CBA is being conducted can help working-group members better understand the function of crime analysts; it also provides transparency. Group members can also assist with gathering data, establishing the parameters of the study, vetting portions of

Having specific, even if qualitative, answers can help make a justifiable case for why a crime analyst is needed.

it, developing recommendations based on the CBA's findings, and communicating the results and recommendations to other audiences.¹⁹

We encourage interested parties to consult the references below and the resources at the Cost-Benefit Knowledge Bank website (cbkb.org) for more information about cost-benefit analysis.

Appendix: What budget officials want to know

Budget officials and analysts don't look at budget requests as just a numbers game. They're interested in what the numbers mean and whether they make sense. Expect budget analysts to ask about the following information.²⁰ Your answers to the three questions in the second section of this paper ("Explaining the value of crime analysts," page 5) will help you address most of the questions below. The additional questions ask about political and revenue-related impacts, which were not discussed in this paper.

GENERAL

1. Why is this position needed?
2. What information have you collected to support your case that this position is needed?
3. What makes this position a higher priority than your other priorities?
4. What are the responsibilities and duties of this position?
5. How do you plan to measure results?
6. How did you get by without this position before and what were the consequences?
7. What will happen if the position is not funded?

COST SPECIFICS

8. What are the personnel requirements?
9. What are the total direct and indirect ongoing costs?
10. How much and what type of training will be required?
11. What additional equipment is necessary?

ALTERNATE SERVICE DELIVERY

12. Can the objectives of this position be achieved in other ways?
13. What other ways to carry out these objectives have you considered (e.g., can this position be contracted or shared with another agency)?
14. What alternate service-delivery approaches have you rejected?

ADDITIONAL QUESTIONS

15. Can the costs related to this position be recovered? How?
16. What funding will pay for this position? Can it be financed through a public or private grant?
17. Will taxes or fees go up?
18. What are the possible political impacts? Who will benefit? Who will be hurt?
19. Which districts or wards will benefit from this position?
20. What trade-offs can be made?

ENDNOTES

- 1 Taylor, Bruce, and Rachel Boba, with Jeff Egge, *The Integration of Crime Analysis into Patrol Work: A Guidebook* (Washington, DC: United States Department of Justice, Office of Community Oriented Policing Services, 2011), 6.
- 2 For more information about CBA and justice investment, readers are encouraged to visit the Cost-Benefit Knowledge Bank for Criminal Justice website at cbkb.org.
- 3 See for example, Rempel, Michael, and Dana Fox-Kralstein, Amanda Cissner, Robyn Cohen, Melissa Labriola, Don Farole, Ann Bader, and Michael Magnani, *The New York State Adult Drug Court Evaluation: Policies, Participants, and Impacts* (New York: Center for Court Innovation, 2003); and Rossman, Shelli B., John K. Roman, Janine M. Zweig, Michael Rempel, and Christine H. Lindquist, *The Multi-Site Adult Drug Court Evaluation* (Washington, DC: Urban Institute, 2011).
- 4 Taylor et al., 2011, p. 13.
- 5 This list is derived from the International Association of Crime Analysts' list of suggested questions for interviewing prospective hires, at http://www.iaca.net/dc_interviews.asp (accessed February 11, 2014).
- 6 Ratcliffe, Jerry, *Integrated Intelligence and Crime Analysis: Enhanced Information Management for Law Enforcement Leaders* (Washington, DC: Police Foundation, 2007), 10.
- 7 White, Matthew, *Enhancing the Problem-Solving Capacity of Crime Analysis* (Washington, DC: Office of Community Oriented Policing Services, 2008), 19.
- 8 Refer to the Technology Decision Tool developed by the National Law Enforcement and Corrections Technology Center. <https://www.justnet.org/pdf/Technology-Decision-Tool.pdf> (accessed February 12, 2014). Section 4 of the tool provides a detailed list of life-cycle costs.
- 9 O'Shea, Timothy, and Keith Nicholls, *Crime Analysis in America: Findings and Recommendations* (Washington, DC: Office of Community Oriented Policing Services, 2003), 18.
- 10 White, 2008, p. 19.
- 11 Analogs can be found in shared staffing and outsourced services for forensic crime analysis and social network analysis for gathering intelligence.
- 12 Wood, Len, *Little Budget Book: A Portable Budgeting Guide for Local Government*, (Rancho Palos Verdes, CA: Training Shoppe, 2000).
- 13 Heaton, Paul, *Hidden in Plain Sight: What Cost-of-Crime Research Can Tell Us About Investing in Police* (Santa Monica, CA: RAND Corporation, 2009), http://www.rand.org/pubs/occasional_papers/OP279/ (accessed February 3, 2014), 10-18.
- 14 Ludwig, Jens, and John J. Donohue III, *More COPS*, Brookings Policy Brief Series (Washington, DC: Brookings Institution, 2007), Brief No. 158.
- 15 Taylor et al., 2011, p. 13.
- 16 For example, McCollister, Katherine E., Michael T. French, and Hai Fang, "The cost of crime to society: New crime-specific estimates for policy and program evaluation," *Drug and Alcohol Dependence* 108, nos. 1-2 (2010), 98-109.
- 17 For more information on victim costs of crime, refer to cbkb.org/toolkit/victim-costs/.
- 18 An obvious scenario would be hiring an additional sworn officer rather than employing a crime analyst. Note that determining the return on investment of a single sworn officer presents the same challenges as determining the return on investment of a crime analyst: pinpointing the impact that one person would have on the measure of interest. As noted earlier, previous CBAs of the monetary value of hiring additional officers looked at macro-level increases in police-force strength.
- 19 For more resources and strategies about applying CBA to policymaking, please go to <http://cbkb.org> and look for the blog post "11 resources for policymakers" (<http://cbkb.org/2013/01/new-to-cbkb-org-check-out-these-11-resources-for-policymakers/>) and the paper *Building Cost-Benefit Analysis Capacity in Criminal Justice: Notes from a Roundtable Discussion*.
- 20 Adapted from Wood, 2000.

Acknowledgments

The authors would like to thank Ed Banks, senior policy advisor of the Strategic Initiatives Unit at the Bureau of Justice Assistance (BJA), BJA visiting fellow Craig Uchida, and Cynthia L. Collard, U.S. Department of Justice Leadership Excellence and Achievement Program detailee to BJA, for contributing their expertise and insights to this paper.

About the Cost-Benefit Analysis Unit

Vera's Cost-Benefit Analysis Unit provides policymakers with clear, accessible information on the economic pros and cons associated with criminal and juvenile justice investments so that they can identify effective, affordable interventions for their jurisdictions and allocate resources accordingly.

About the Vera Institute of Justice

The Vera Institute of Justice is an independent nonprofit organization that combines expertise in research, demonstration projects, and technical assistance to help leaders in government and civil society improve the systems people rely on for justice and safety.

The Cost-Benefit Knowledge Bank for Criminal Justice (CBKB) is supported by Grant No. 2009-MU-BX K029 awarded by the Bureau of Justice Assistance. The Bureau of Justice Assistance is a component of the Office of Justice Programs, which also includes the Bureau of Justice Statistics, the National Institute of Justice, the Office of Juvenile Justice and Delinquency Prevention, the Office for Victims of Crime, the Community Capacity Development Office, and the Office of Sex Offender Sentencing, Monitoring, Apprehending, Registering, and Tracking. Points of view or opinions in this document are those of the author and do not necessarily represent the official position or policies of the U.S. Department of Justice.

© 2014 Vera Institute of Justice. All rights reserved.

Additional copies can be obtained from the communications department of the Vera Institute of Justice, 233 Broadway, 12th floor, New York, New York 10279, (212) 334-1300. This report is available online at www.vera.org/cba.

Please direct requests for additional information about this paper to Carl Matthies at cmatthies@vera.org.

Suggested Citation

Carl Matthies and Tina Chiu. *Putting a Value on Crime Analysts*. New York: Vera Institute of Justice, 2014.



cost-benefit knowledge bank
for criminal justice

CBKB

A project of the Vera Institute of Justice



BJA
Bureau of Justice Assistance
U.S. Department of Justice

Vera Institute of Justice
233 Broadway, 12th Floor
New York, NY 10279
Tel: (212) 334-1300
Fax: (212) 941-9407

Washington DC Office
1100 First St. NE, Suite 950
Washington, DC 20002
Tel: (202) 465-8900
Fax: (202) 408-1972

New Orleans Office
546 Carondelet St.
New Orleans, LA 70130
Tel: (504) 593-0937
Fax: (212) 941-9407

Los Angeles Office
707 Wilshire Blvd., Suite 3850
Los Angeles, CA 90017
Tel: (213) 223-2442
Fax: (213) 955-9250

VERA
INSTITUTE OF JUSTICE