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Building Efficient Crime Prevention Strategies:

Considering the Economics of Investing in Human Development

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The aftermath of the global recession has encouraged policy makers to confront the staggering public burden of crime (Cohen, 1988, 2005; Ludwig, 2010; McCollister, French, and Fang, 2010; Miller, Cohen, and Rossman, 1993). In this context, there is growing acceptance that many “tough-on-crime” policies have become primary drivers of crime’s increasing societal cost (Andrews and Bonta, 2010; Artello, 2013; Becker, 1968; Braga and Weisburd, 2011; Cameron, 1988; Cohen, 2005; Paternoster, 2010; Rikard and Rosenberg, 2007; Vitiello, 2013). Policy makers have responded with growing interest in making strategic investments in youth that prevent the development of lifetime offenders, instead of continuing to institute harsher punishments that lead to costly mass incarceration (Dodge, 2001; Farrington, 1994; Heckman, 2006; Homel, 2013; O’Connell, Boat, and Warner, 2009). In response, innovative strategies for preventing crime and controlling costs are being engaged (Barnett and Masse, 2007; Guyll, Spoth, and Crowley, 2011; Welsh and Farrington, 2010). At the forefront are developmental prevention programs that intervene early in life to reduce risk factors for delinquent and criminal behaviors (Durlak, 1998; Eckenrode et al., 2010; Hawkins, Catalano, and Miller, 1992; Hawkins and Weis, 1985; Reynolds, Temple, White, Ou, and Robertson, 2011). As a growing body of evidence illustrates, when implemented appropriately, these developmental prevention efforts not only effectively prevent crime but also are cost-effective solutions that save public resources (Crowley, Hill, Kuklinski, and Jones, 2013; Crowley, Jones, Greenberg, Feinberg, and Spoth, 2012; Heckman, Moon, Pinto, Savelyev, and Yavitz, 2010; Klietz, Borduin, and Schaeffer, 2010; Kuklinski, Briney, Hawkins, and Catalano, 2012; Reynolds et al., 2011).

Manning, Smith, and Homel (2013, this issue) outline an innovative approach for valuing these programs to guide policy making. Their work draws on Saaty’s analytical hierarchy process (AHP), often used in the private sector, but less frequently in policy settings (Saaty, 1988). This method ultimately provides an important framework for discussing how to build effective and efficient crime prevention efforts informed by developmental science (Gifford-Smith, Dodge, Dishion, and McCord, 2005; Lerner et al., 2005; Osgood, 2005).

In this essay, I expand on Manning et al.’s (2013) discussion by highlighting how this new approach can complement current efforts to value developmental crime prevention programs for evidence-based policy making. I then discuss the importance of considering local

programming capacity when investing in prevention and the economic value of prevention approaches that invest in both youth and their families (i.e., dual-generation approaches). Next, I provide a forward look at two approaches policy makers can engage when seeking to fund developmental prevention. I then conclude with four action steps for research and policy that can facilitate the dissemination of effective and efficient developmental crime prevention efforts.

Strategies for Valuing Developmental Prevention to Inform Public Policy

Broadly, the priority ranking and utility approach employed by Manning et al. (2013) is similar to ex-ante approaches used to elicit willingness-to-pay estimates around the cost of crime as well as cost-effectiveness analyses often employed in health-care decision making (Birch and Gafni, 1992; Donaldson, Farrar, Mapp, Walker, and Macphee, 1997; Ludwig and Cook, 2001; Olsen and Smith, 2001; Zarkin, Cates, and Bala, 2000). Such approaches are gaining acceptance as they aim to estimate the value of preventing crime more completely—departing from ex-post approaches that rely explicitly on monetizable burden (Brookshire and Crocker, 1981; Ryan and Watson, 2009). Furthermore, particularly for health outcomes, they avoid certain distributional problems that value morbidity and mortality at different rates for different groups (e.g., women and minorities; see Donaldson, Birch, and Gafni, 2002). The United Kingdom's National Institute for Health and Clinical Excellence (NICE) is one of the better known examples where national health policy is currently being informed by such utility-based approaches for valuing public services (Kelly et al., 2010; Weatherly et al., 2009).

Although there is growing support for employing utility estimates to guide decision making, these approaches can be limited by the lack of clear cost and benefit estimates (Marsh, Chalfin, and Roman, 2008; Weinstein and Manning, 1997). In particular, analysts scoring the fiscal impact of new policies for government bodies require robust estimates of prevention programs' downstream costs to determine potential savings to agency budgets (Aos, Lieb, Mayfield, Miller, and Pennucci, 2004; OMB, 1992). Several new efforts over the last 5 years have sought to promote the development of such estimates. One initiative that has gained substantial traction in the United States is the *Results First Project* supported by the Pew Charitable Trust and MacArthur Foundation (Dueffert, 2012). This initiative partners with states to implement an innovative benefit-cost approach that assists policy makers seeking to invest in programs that can reduce crime, improve health, and result in public savings. By building tailored models of how programs impact a particular state's budget, policy decisions can be made that are beneficial to both at-risk populations and local budgets (Dueffert, 2013).

In part, the value of approaches that seek to monetize program outcomes is borne out by the ability to make estimates transferable across settings (where the value of currency is likely shared across groups). The approach outlined by Manning et al. (2013) captures a more idiographic—and possibly accurate—estimate of a group's value of prevention programs, but this valuation is temporally and geographically bound. Specifically, a group of decision makers surveyed in one area or time may have a dramatically different valuation of a program than decision makers in another region at a different time. To use Manning et al.'s

approach effectively to inform policy making, analysts will need to survey a larger sample of decision makers to develop more robust estimates. Furthermore, estimates will need to account for the larger body of prevention programs available in the marketplace. Although Manning et al. include more than 20 programs, policy makers may question valuation estimates that neglect commonly used or home-grown—even if ineffective—prevention programs. Ultimately, these programs may need to be included to facilitate decision maker buy-in.

In this context, there is a role for both utility approaches that elicit clear guidance for policy making as well as economic and fiscal analyses that place a monetary value on crime prevention programs. Next, I consider the importance of capturing infrastructure needs in program costs, the case for dual-generation programs, and promising approaches for investing in prevention.

Planning for Infrastructure and Capacity: The Costs of Developmental Crime Prevention

Recently, while accepting the 2013 Stockholm Prize in Criminology, Dr. David Farrington called for creation of national agencies to coordinate domestic prevention strategies (Farrington, 2013). Although he is not the first to recognize that the patchwork of developmental crime prevention programs spanning the globe is inadequate for meeting the needs of youth at risk, Professor Farrington went further to outline the form and function of such agencies. This outline included the (a) recognition that primary crime prevention efforts are largely missing in most countries, (b) the need for continuous funding of prevention programs, and (c) the importance of building local prevention capacity. At the core of Professor Farrington's message was that the continued lack of infrastructure and capacity to support the delivery of developmental prevention programs is a major threat to successfully preventing crime.

A closer look at the existing criminal justice, law enforcement, and education systems quickly reveals the limited capacity of localities to install and implement effective and efficient prevention efforts successfully (Andréasson, Hjalmarsson, and Rehnman, 2000; Ringwalt et al., 2002; Spoth and Greenberg, 2011; Welsh, Sullivan, and Olds, 2009). For instance, most crime prevention is provided either when youth first enter the juvenile justice system (secondary prevention) or in an effort to prevent future recidivism (tertiary prevention; Farrington, 2013). These efforts are generally delivered in the context of the criminal justice system. In contrast, primary crime prevention programs have little or no natural home (Dunworth, Mills, Cordner, and Greene, 1999; Hawkins and Weis, 1985; Hawkins et al., 2008; Spoth, Greenberg, Bierman, and Redmond, 2004). Schools generally have too many competing priorities to provide potent crime prevention efforts, and law enforcement personnel are rarely given the resources to implement effective crime prevention strategies among populations that have yet to commit a crime (Dunworth et al., 1999; Spoth et al., 2004).

Developmental crime prevention programs delivered without appropriate levels of infrastructure and capacity not only are at risk for failing but also clutter a crowded

marketplace. They contribute to a belief that prevention, although it is a nice idea, has weak effects at best (Caulkins, Pacula, Paddock, and Chiesa, 2004; Spence and Shortt, 2007). In reality, developmental prevention programs that have been delivered with fidelity and have received adequate resources are not only effective but also cost effective (Barnett and Masse, 2007; Dino, Horn, Abdulkadri, Kalsekar, and Branstetter, 2008; Foster, Jones, and the Conduct Problems Prevention Research Group, 2006; Gyll et al., 2011; Kuklinski et al., 2012; Reynolds et al., 2011). Also, these programs face the same loss of potency that many effective medical interventions experience when delivered in parts of the world without the requisite infrastructure (electricity and refrigeration) and capacity (medical knowledge and reliable staff; Woolf, 2005). The Bill and Melinda Gates Foundation's work with disseminating malaria vaccines is a clear example of the value of local infrastructure and capacity (Litzow and Bauchner, 2006).

Although Manning et al.'s (2013) work focuses on how to value prevention programs, researchers and policy makers alike must ask: What does an effective infrastructure for crime prevention programs look like, and what will it cost? The reality of investing in human development means that effective and efficient prevention efforts cannot succeed in environments with unstable or mismanaged funding streams (Johnson, Hays, Center, and Daley, 2004; Scheirer and Dearing, 2011). To build efficient prevention efforts, investments also must support building local infrastructure and developing sustainable efforts with diverse funding streams that, when possible, recapture downstream savings for reinvestment (Catalano, 2007; Crowley et al., 2012). To accomplish this goal, first researchers will need to provide a clear estimate of these costs.

Investing Across Ecological Systems: The Case for Dual Generation

As described by Manning et al. (2013), the economic benefits of developmentally based prevention programs for crime and health are notoriously difficult to monetize (Karoly, 2008). Numerous barriers are holding the field back in this area, but the primary obstacle stems from the difficulty in linking outcomes in childhood to future economic impact (Crowley et al., 2013; Karoly, 2011). Early delinquency often occurs initially within the home and then in primary school where costs are low and difficult to quantify (likely in the form of lost parent or teacher productivity; Karoly, 2008; Karoly et al., 1998). These costs often are only apparent for the severest youth—until adolescence—when the rate of and harm from delinquent behavior grows exponentially (Conduct Problems Prevention Research Group, 1992; Foster and Jones, 2007). Furthermore, the greatest economic impacts from criminal activity tend not to become manifest until youth enter the labor force or the criminal justice system (Bongers, Koot, van der Ende, and Verhulst, 2004; Cohen, Piquero, and Jennings, 2010; Hao and Woo, 2012; Heckman et al., 2010). Consequently, the delayed benefits to youth from prevention programs makes investing in new developmental efforts difficult not only from a budgetary standpoint but also from a political one (Welsh and Farrington, 2012). Interestingly, some forms of developmental crime prevention programs seek to target not only youth but also their families (St. Pierre, Layzer, and Barnes, 1995). Growing out of ecological systems theory, which holds that human development is impacted by several environmental systems, researchers have found these “dual-generation” approaches could result not only in long-term savings from youth benefits but also in more

immediate economic and fiscal savings from parent benefits (Bronfenbrenner, 1986; Miller, 2013; Sommer et al., 2012).

In practice, dual-generation approaches comprise efforts that combine high-quality early education programs for youth with opportunities for parents to participate in workforce development and parent training programs (Foundation for Child Development, 2012). In this manner, benefits accrue not only in the long term for youth but also in the near term for parents. In turn, these improved parent outcomes augment developmental gains from early education programs (e.g., socioeconomic, health, and parenting; Yoshikawa, Aber, and Beardslee, 2012). One commonly cited example is the Nurse Family Partnership program. In this program, public savings accrue not only from children when they reach adolescence (greater than 25% reduction in arrest between 12 and 15 years of age) but also beginning directly after delivery from parents (more than \$8,000 in additional tax revenue in 2013 dollars, 33% reduction in welfare use; Karoly et al., 1998; Miller, 2013). Importantly, Manning et al. (2013) found similar support for dual-generation approaches using the AHP method, where programs that deliver preventive services in preschool and incorporate family interventions were the most preferred option.

In this manner, dual-generation approaches can make developmental crime prevention programs more appealing to decision makers seeking to demonstrate the value of their investments in the near term. Furthermore, knowing that a sizable proportion of a crime prevention program's return will occur within the first few years after the initial investment can buffer its impact on tight government budgets. Therefore, this knowledge leads us to two innovative approaches for investing in and sustaining developmental crime prevention programs: prevention portfolios and social impact bonds.

Hedging Our Bets: Building Prevention Portfolios and the Promise of Social Impact Bonds

Global austerity efforts have forced policy makers to both cut services and avoid investing in programs that carry even a relatively low risk of failure. In response, many policy makers across the political spectrum desire robust estimates of a program's potential benefits and costs before they are willing to support new policies (The Pew Charitable Trusts, 2012). In response, innovative approaches for funding new programs and lowering risk to the taxpayer are gaining traction.

One such approach is the development of investment portfolios comprised of many prevention programs. These portfolios offer policy makers a variety of programs with different returns-on-investment (ROIs) and different levels of risk (Aos et al., 2004, 2011; Drake, Aos, and Miller, 2009; Lee et al., 2012). In this manner, policy makers can make explicit asset allocation decisions for each program in the portfolio. One example of such an approach comes from the Washington State Institute for Public Policy (WSIPP). To build these profiles, WSIPP has conducted large-scale meta-analyses to develop high-quality estimates of programs' potential ROI and has engaged in sophisticated work modeling the risk of a program failing to produce expected savings. Like traditional financial portfolios, this approach distributes risk across different areas (e.g., primary, secondary, and tertiary

prevention) to protect the principal investment. WSIPP has delivered these estimates to the legislature over the years and has increased state investment in prevention dramatically (Dueffert, 2012). As a result, the state has observed meaningful declines in crime and incarceration—to the extent it avoided planned prison construction. The success of this model was the inspiration behind the Results First Initiative described previously and is being replicated across many U.S. states and internationally (Dueffert, 2013).

In contrast to the portfolio approach that relies on public investment in developmentally based prevention, there is growing interest by many governments in offering the private sector incentives to invest in social welfare programs. One strategy that is gaining increasing support is known as a “social impact bond” (also known as a “social benefit bond,” “social policy bond,” or “pay-for-success bond”). These bonds are offered by governments to private investors to support prevention programs known to have a high ROI (Horesh, 2000; Liebman, 2013; Liebman and Sellman, 2013). The program is delivered by an intermediary supported by the private investors’ funds. If the program is successful in delivering public savings, then the private investors receive both their principal investment and a predefined return (similar to a structured product or equity investment). The first social impact bond was developed by Social Finance UK in 2010. Since then, Australia and the United States have both observed offerings of social impact bonds (e.g., Massachusetts, New York City, and New South Wales). These trials are being closely watched for evidence that this new funding mechanism could be effectively used to support and incentivize efficient developmentally based crime prevention efforts.

Conclusions

Manning et al.’s (2013) valuation approach allows for a systematic comparison of developmental crime prevention programs and has the potential to fill a major gap in current efforts to value prevention for informing public policy. By further considering the economics of investing in developmental crime prevention programs, we can identify multiple actionable steps for research and policy. Combined, they offer the opportunity to build more efficient crime prevention efforts that will lead to substantial future savings. These steps are as follows:

1. Replicate Manning et al.’s valuation approach (a) in new settings, (b) with new populations, and (c) with a broader array of crime prevention programs.
2. Develop robust estimates of the costs from implementing and scaling developmental crime prevention programs.
3. Invest in dual-generation interventions that deliver prevention programs to both youth and their families.
4. Engage innovative mechanisms for investing in crime prevention efforts, including the development of prevention portfolios and social impact bonds.

In this context, policy makers wishing to install effective and efficient developmental crime programs into current crime prevention and control efforts should consider the utility of Manning et al.’s (2013) AHP approach and encourage replication of the process among their

peers. Furthermore, policy makers should carefully consider the available programming infrastructure and capacity in target areas, the use of dual-generation programs, and innovative investment strategies that protect public resources from risk.

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Biography

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