## Testimony of **Professor Jens Ludwig**

Professor Georgetown University September 19, 2006

Testimony United States Senate Committee on the Judiciary The Costs of Crime September 19, 2006 Professor Jens Ludwig Georgetown Public Policy Institute, Georgetown University Chairman Specter, Ranking Member Leahy, and Members of the Committee:

Thank you for inviting me to testify today. My name is Jens Ludwig. I am a Professor of Public Policy at Georgetown University, as well as a Faculty Research Fellow of the National Bureau of Economic Research. It is an honor to appear before this committee to discuss what is known about the costs of crime to American society.

My testimony is divided into two sections: a summary of the conclusions, and supporting analysis.

Summary of major conclusions

? The costs of crime to America are plausibly on the order of \$2 trillion per year. By way of comparison, total Gross Domestic Product (GDP) in the United States in 2004 was equal to \$11.7 trillion. Put differently, the "crime tax" on Americans - that is, the reduction in quality of life due to crime - is the equivalent of around 17% of GDP.

? Included in the overall cost of crime is around \$200 billion in government expenditures on the criminal justice system and another \$167 billion in costly private measures to protect people and businesses against crime. Non-pecuniary costs also figure prominently in the burden of crime to American society.

? While "street crime," particularly violent crimes, is disproportionately concentrated among our nation's poorest residents, the costs of crime are much more evenly distributed than victimization statistics would suggest. Available research indicates that crime imposes large costs on middle-class families through increased taxes, private measures to reduce the risk of victimization, and the fear and anxiety associated with the risk of victimization to one's self and loved ones.

? Given the enormous toll that crime imposes on American society, even costly new initiatives to reduce crime can generate benefits to American taxpayers and citizens that justify the increased government expenditures.

? Particularly cost-effective may be crime-control interventions that focus on those people who are at the highest risk for criminal activity, such as ex-offenders who are re-entering society from prison.

## Supporting text

The annual costs of crime to American society each year are probably on the order of \$2 trillion. These costs include the costs of victimization from both "street" and "white collar" crimes, the costs of administering the criminal justice system and costly private activities, including out-of-pocket expenditures, designed to reduce individual risks of victimization. The specific components of this estimate are as follows; details about the methods through which I derive these estimates, based primarily on updating previous work by the leading economists who work in this area, David A. Anderson (1999) and Mark A. Cohen (2005), are included in a Technical Appendix:

\$694 billion Victimization costs
\$192 billion Government expenditures on criminal justice
\$167 billion Private expenditures on crime prevention
\$253 billion Lost value of criminals' time
\$730 billion White collar crime
\$2.04 billion Total

These costs are enormous by any standard. By way of comparison, the entire federal defense budget in 2005 was \$465.9 billion. The total budget for the federal government as a whole in 2005 was \$2.48 trillion. Total Gross Domestic Product (GDP) in 2004 for the United States was equal to \$11.7 trillion. It is important to note that my estimate for the cost of crime includes non-pecuniary costs that do not show up on a government budget ledger or in the official GDP calculations, which should be kept in mind when comparing my estimate to these other figures. But the non-pecuniary costs of crime are just as real as federal spending or GDP figures, even if they are "off budget," because they reduce the quality of life to Americans in a real way. The implication of my estimate is that crime reduces the quality of life in America - a "crime tax" - by the equivalent of around 17% of GDP.

This estimate of \$2 trillion for the total costs of crime is enormous but, reassuringly, quite consistent with other estimates for costs of specific types of crime. For example Duke University professor Philip Cook and I estimate that the social costs of just those violent crimes where the victim is shot and injured with a firearm is nearly \$100 billion in current dollars (Cook and Ludwig, 2000; Ludwig and Cook, 2001). Crimes that result in the shooting of a victim represent a minuscule share of the overall volume of crime in America - albeit an unusually costly share of the crime problem - so that my own estimate with Cook for the costs of crime-related gun violence fits comfortably next to the overall estimate of \$2 trillion for the total costs of all crime. Note that my estimate for the costs that crime imposes on American society may be conservative in that it excludes some potentially important ways in which private decisions are affected by the risk of crime victimization. One of the important ways that crime distorts the way Americans live their lives if by affecting where they live. Specifically, previous research has demonstrated that crime contributes to the flight of

city residents to the suburbs (Cullen and Levitt, 1999), which in turn depresses urban property

values and increases traffic congestion, commute times, fatalities associated with motor vehicle accidents, and overall gasoline consumption. While it is difficult to obtain a national estimate for the additional costs associated with crime's effects on suburban flight, there are reasons to believe they may be substantial. For example economist Amy Schwartz and her colleagues estimate that fully one-third of the increase in property values in New York City over the course of the 1990s may be due to the dramatic fall in crime observed in that city during the decade (Schwartz et al., 2003).

The costs of crime, particularly violent street crimes, are disproportionately borne by our nation's most disadvantaged residents. For example data from the National Crime Victimization Survey (NCVS) for 2004-5 imply that the rate of violent crime victimization for people in households with annual incomes above \$75,000 - an income category that includes I believe every member of the U.S. House of Representatives and Senate as well as the majority of my colleagues on the Georgetown University faculty - is about 17 per 1,000 people. By comparison the violent crime victimization rate for people in households with incomes below \$7,500 per year is around 38 per 1,000, more than twice as high as the violent crime victimization risk faced by the more affluent Americans.

Yet even middle-class American families experience substantial reductions in their quality of life as a result of the "crime tax." My own study of the costs of gun crime with Duke professor Philip Cook shows that even middle class families are willing to pay on average several hundred dollars per year to reduce the rate of gun crime in their communities by around a third. One reason that the costs of crime to society are more evenly distributed than victimization statistics would suggest is that because no one is immune from the risk of crime victimization, we all live with the anxiety and fear that is associated with worrying about injury or an otherwise traumatic victimization to ourselves or, perhaps more importantly, our spouses, parents and children. As suggested above, some of us seek to reduce this anxiety through measures like living in the suburbs rather than the city, thereby incurring other costs such as increased commute times, fuel costs and increased risk of injury from driving longer distances to work.

The large and widely-shared burden of crime in America implies that even costly new measures to reduce crime may generate benefits to society as a whole and to the government budget bottom line that outweigh any new expenditures. For instance, one of the most famous early childhood education interventions in the U.S., known as Perry Preschool, was provided to a sample of very low-income children in Ypsilanti, Michigan in the 1960s. The experiences of program participants have now been followed up through their 40th birthdays. Data from Perry Preschool suggests that the costs from crime reductions alone outweigh the nearly \$18,000 per child costs of this compensatory early childhood education program. The overall ratio of benefits to costs in this program is estimated to be around 7 to 1 (Belfield et al., 2006). As another example, a growing body of research in economics and criminology suggests that increased expenditures on law enforcement personnel, such as through the federal government's COPS program, can reduce crime and generate benefits to society that

tederal government's COPS program, can reduce crime and generate benefits to society that exceed the cost of expanding the police budget (Levitt, 2002; Donohue, 2004). The ratio of benefits to costs from increased police expenditures may be further enhanced by targeting the additional police resources towards the highest-crime neighborhoods, or towards the highest-cost parts of the crime problem such as gang violence or gun violence (Braga et al., 2001; Sherman, 2002; Cohen and Ludwig, 2003; Ludwig, 2005; Cook and Ludwig, 2006). Finally, it is worth noting that the cost-effectiveness of crime-reduction efforts in some cases can be enhanced by targeting interventions on the highest-risk populations. One of the most widely cited and replicated findings in the field of criminology comes from following the lifetime arrest experiences of a given birth cohort of people. Studies of this sort regularly find that around 6% of each birth cohort winds up accounting for between 50-60% of all crime committed by people in that cohort (see for example Tracy, Wolfgang and Figlio, 1990). The implication is that criminal justice or social program interventions that are capable of reducing crime may be especially efficient if directed at the most criminally active subset (i.e. 6%) of each birth cohort. Prisoner re-entry programs such as those considered recently by this committee may represent one way of targeting government attention on those at greatest risk for additional criminal activity.

## Technical Appendix

Victim costs: Vanderbilt economist Mark Cohen and his colleagues estimate that the social costs imposed by just five serious types of crime - murder, burglary, armed robbery, serious assaults, and rape / sexual assaults - is more than \$500 billion (Cohen et al., 2004; Cohen, 2005). This figure is derived by adjusting Cohen's estimates for the costs per crime for inflation (from 2000 dollars to 2006 dollars), then multiplying these costs per crime by FBI figures for the number of homicides in 2004 and estimates from the National Crime Victimization Survey for the number of victimizations of each type of crime in 2005. Using an older methodology but applied to a wider variety of crimes, Cohen's (2005, p. 45) calculations suggest these five serious crimes account for around 72% of the total costs of all crime victimizations. My estimate for the total costs of crime victimization is thus equal to (\$500 billion / .72) = \$694 billion.

Because Cohen's new crime figures are derived from contingent valuation questions that ask survey respondents about their willingness to pay (WTP) to reduce crime in their communities, in principle there could be some double-counting with direct government or private expenditures at crime prevention described below. The degree of overlap across categories will depend in part on how preventive measures change in response to changes in the level of crime, something about which relatively little is currently known.

Government expenditures: The Sourcebook of Criminal Justice Statistics (2003) reports that total spending on the criminal justice system by all levels of government in 2001 was equal to \$167 billion. While I do not know how comprehensive criminal justice expenditures have changed since then, if real expenditures stayed constant than adjusting for inflation alone increases this figure to \$192 billion.

Private protective measures: Anderson (1999) estimates that private individuals and businesses spend another \$51.5 billion in 2000 dollars to protect against crime victimization risks (guns, guard dogs, security guards, surveillance cameras, etc.), and that the value of the time that people spend on securing their assets against crime - locking doors, participating in neighborhood watch programs, etc. - is worth another \$90.3 billion in 2000 dollars. Adjusting for inflation suggests that total private protective measures may be on the order of \$167.3 billion.

Opportunity costs of criminals' time: In a world without crime, criminals would spend some of the time they currently devote to planning and executing criminal activities to pro-social activities that are productive for society as a whole. Anderson (1999) estimates the lost value

from the opportunity cost of criminal activity is on the order of \$164 billion, in 1997 dollars. In addition Anderson (1999) estimates the lost productivity associated with time that incarcerated criminal spend behind bars to be equal to around \$35.1 billion in 1997 dollars. Adjusting for inflation suggests that the total value of criminals' time devoted to crime or behind bars is around \$252.9 billion.

White collar crime: Cohen (2005) cites a 2002 survey conducted by the Association of Certified Fraud Examiners suggesting that the average business loses around 6 percent of revenue to fraud and employee theft. If this estimate is extrapolated to all firms in the U.S. the survey findings would imply losses of white collar crime to businesses alone on the order of \$600 billion in 2002 dollars, or the equivalent of around \$680 billion in current dollars. Cohen (2005) also cites a study by Titus, Heinzelmann and Boyle (1995) suggesting that the cost of fraud to consumers may be on the order of \$45 billion in 2002 dollars, or about \$50 billion in current dollars. Both of these estimates are subject to some inherent measurement uncertainties, although it is encouraging that our implied figure for the costs of white collar crime - around \$730 billion per year - is generally consistent with Anderson's (1999) tabulation of \$750 in fraud costs derived using a more conservative estimate for the costs of fraud and employee theft to businesses but accounting for other types of fraud like unpaid taxes, health insurance fraud, financial institution fraud and mail fraud. Moreover these estimates might be conservative in the sense that this calculation omits the costs of consumer fraud where the victim never realizes he or she has been defrauded, and ignores many of the potentially substantial private costs undertaken by individuals and firms to protect themselves against white collar crime. Finally, it is useful to note that economists sometimes will exclude the value of property losses from crime because they are simply transfers from law-abiding citizens to criminals, rather than absolute losses from a larger society perspective. But this approach gives criminals full standing in a societal benefit-cost calculation, an assumption that for present purposes I do not make.

## References

Anderson, David A. (1999) "The Aggregate Burden of Crime." Journal of Law and Economics. 42(2): 611-642.

Belfield, Clive R., Milagros Nores, Steve W. Barnett and Lawrence J. Schweinhart (2006) "The High/Scope Perry Preschool Program: Cost-Benefit Analysis Using Data from the Age-40 Followup." Journal of Human Resources. XLI(1): 162-190.

Braga, Anthony A., David M. Kennedy, Elin J. Waring, and Anne Morrison Piehl (2001) "Problem-oriented policing, deterrence, and youth violence: An evaluation of Boston's Operation Ceasefire." Journal of Research in Crime and Delinquency. 38: 195-225.

Cohen, Jacqueline and Jens Ludwig (2003) "Policing crime guns." In Evaluating Gun Policy, Edited by Jens Ludwig and Philip J. Cook. Washington, DC: Brookings.

Cohen, Mark A. (2005) The Costs of Crime and Justice. NY: Routledge.

Cohen, Mark A., R.T. Rust, S. Steen and S. Tidd (2004) "Willingness-to-pay for Crime Control Programs." Criminology. 42(1): 86-106.

Cook, Philip J. and Jens Ludwig (2000) Gun Violence: The Real Costs. NY: Oxford University Press.

Cook, Philip J. and Jens Ludwig (2006) "Aiming for Evidence-Based Gun Policy." Journal of Policy Analysis and Management. 25(3): 691-736.

Cullen, Julie Berry and Steven D. Levitt (1999) "Crime, Urban Flight and the Consequences for

Cities." Review of Economics and Statistics. 81(2): 159-69.

Donohue, John J. (2004) "Clinton and Bush's Report Cards on Crime Reduction." The Economist's Voice. Volume 1, Issue 1, Article 4.

Levitt, Steven D. (2002) "Using Electoral Cycles in Police Hiring to Estimate the Effect of Police on Crime: A Reply." American Economic Review. 92: 1244-1250.

Ludwig, Jens (2005) "Better Gun Enforcement, Less Crime." Criminology and Public Policy. 4(4): 677-716.

Ludwig, Jens and Philip J. Cook (2001) "The Benefits of Reducing Gun Violence: Evidence from Contingent-Valuation Survey Data." Journal of Risk and Uncertainty. 22: 207-26.

Schwartz, Amy Ellen, Scott Susin, and Ioan Voicu (2003) "Has Falling Crime Dirven New York City's Real Estate Boom?" Journal of Housing Research. 14(1): 101-135.

Sherman, Lawrence W. (2002) "Fair and Effective Policing." In Crime: Public Policies for Crime Control. Edited by James Q. Wilson and Joan Petersilia. Oakland, CA: Institute for Contemporary Studies Press.

Sourcebook of Criminal Justice Statistics (2003) Washington, DC: Bureau of Justice Statistics. Titus RM, Heinzelmann F, and JM Boyle (1995) "Victimization of Persons by Fraud." Crime and Delinquency. 41: 54-72.

Tracy, Paul E., Marvin E. Wolfgang and Robert M. Figlio (1990) Delinquency Careers in Two Birth Cohorts. New York: Plenum Press.

- 7 -