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Measuring Public Perceptions of Appropriate Prison Sentences

ABSTRACT

This study tested several new methodologies designed to elicit meaningful public input on criminal justice policy issues such as the appropriate sentence for convicted offenders, the parole decision, allocation of government funds towards crime prevention programs, and the public's willingness to pay to reduce crime. Based on a nationally representative survey of 1300 U.S. adults, we found that the public largely concurs with current sentencing decisions about incarceration and sentence length - with the exception of certain crimes - particularly drug offenses (which the public believes are dealt with too harshly) and certain white collar crimes (which the public believes are not dealt with harshly enough). We found strong support for spending more money than currently to reduce crime below current levels. However, much of that support is for increased prevention programs targeted at high-risk youth, more police on the street, and for drug treatment programs for nonviolent offenders - rather than money for more prisons. The typical household would be willing to pay between \$75 and \$150 per year for crime prevention programs that reduced crimes by 10% in their communities. In the aggregate, these amounts imply a willingness to pay to reduce crime of about \$23,000 per burglary, \$60,000 per serious assault, \$213,000 per armed robbery, \$225,000 per rape and sexual assault, and \$9.1 million per murder.

EXECUTIVE SUMMARY

Measuring Public Perceptions of Appropriate Prison Sentences*

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I. Introduction and Executive Summary

Lawmakers, judges and parole officers make important public policy decisions about who serves time in prison and for how long. Yet, we know little about how the public views these sentences. Prior research has systematically examined the public's perception of the "seriousness" of crimes and arrived at numerical rankings of seriousness that have been used in various policy arenas. Since sentencing goals are multidimensional, "seriousness" cannot necessarily be translated directly into appropriate sentences. A few studies have examined the public's perception of appropriate sentences for crimes. These studies generally ask unconstrained questions that do not involve the hard choices policy makers must face in balancing spending priorities and crowded prisons. They also do not look at the important parole decision, which is often more relevant than the "nominal" sentence.

This research project was designed to test several new methodologies for eliciting information on the public's preferences towards sentencing and parole of criminal offenders. It partly relies upon the well-established methodology used by Wolfgang et al. (1985) and others, whereby a sample of the U.S. public is asked to react to a series of crime vignettes. Although this approach has mostly been used in previous studies on crime seriousness, a few studies have used this approach to gauge the public's attitude towards sentencing. These studies have generally been limited to a few crimes in one state, and more recently (Rossi and Berk, 1995 and 1997), on federal crimes. One of the main purposes of these public opinion surveys has been to compare existing sentencing practice to the public's preferred approach.

Although the approach taken here is similar to that employed by earlier studies of the public's attitude towards sentencing, there are several important differences: (1) this study focuses on crimes normally encountered by local criminal justice agencies - such as burglary, robbery and assault; (2) the study focuses on the parole decision in a constrained choice setting by providing respondents with a more realistic policy setting in which to make decisions; and (3) the study incorporates explicit tradeoffs of various crimes and sentences in order to better understand the true preferences of the public. In addition, this project has explored two new methodologies designed to elicit information on the public's willingness-to-pay for crime prevention and control policies.

The constrained-choice setting used in this study is particularly important, since previous studies have often concluded that the public's preferred sentences are considerably more severe than actual sentencing practice. Previous authors have hypothesized that the higher sentence lengths demanded by the public are partly due to the lack of constraints placed on respondents as compared to those normally faced by policy makers in the real world. It is easy to call for doubling prison lengths, for example, when you are not expecting to pay higher taxes in exchange for this hypothetical answer. This project explicitly addresses this issue by offering a series of paired comparisons from which respondents must choose. For example, respondent were asked to choose which of two offenders should spend the next year in prison given the fact that only one cell is available. Respondent were also asked to choose between the expansion of alternative crime prevention programs verses a specified tax rebate. Finally, adopting a methodology from the environmental economics literature, where similar problems in valuing public goods are found, we elicited information on respondents'

willingness-to-pay for crime reduction strategies. By revealing their perceived benefit from reducing crime, respondents provided us with new estimates of the cost of crime.

The policy relevance of this proposed project is self-evident. Seriousness rankings based on public opinion surveys have been used extensively in both the academic and policy arenas. Examples of policy-relevant applications include: Heller and McEwen (1975), who use seriousness rankings in the process of allocating police patrols; and van den Haag (1982) who advocates the use of seriousness rankings in determining appropriate sentences for convicted criminals. Rossi and Berk (1995 and 1997) compare public preferences for sentencing to the U.S. Sentencing Commission Guidelines for crimes that are common in the Federal system. Finally, estimates of the "cost of crime" are being used in criminal justice policy analysis (see e.g., Cohen, 1998; Rajkumar and French, 1997). Yet, there are only a few existing studies of the cost of crime, and all of them use the same methodology that has the subject of some controversy in the literature. This study utilizes a new methodology to estimate the public's willingness-to-pay for crime control programs.

A. Survey Method

The goal of the survey design was to administer a nationally representative sample survey of 1300 Americans, age 18+, using a carefully designed survey. Thus, the survey development stage was deemed to be the most crucial part of the research project. Among the issues that were addressed during this stage were: the appropriate format for the survey (e.g. telephone, mail, or some combination), survey length, ability of respondents to understand complex questions, finding appropriate language for the

questions so that the meaning received was the same as intended, and whether the survey could move from section to section without introducing respondent bias from previous sections.

After conducting an extensive literature review, an initial draft questionnaire was prepared for discussion purposes. This questionnaire was sent to a panel of eight experts.¹ Three focus groups were held to observe participants' reactions to the revised draft survey instrument and to obtain feedback on how to create a more effective survey. Participants were screened to obtain a cross-section of the general population. Participants were asked questions about their ability to comprehend the crime scenarios and to make an informed judgment about appropriate sanctions.

After extensive revisions of the survey instrument based on the feedback we received from the focus groups, eleven cognitive interviews were conducted, each of one-hour duration. Cognitive interviewing allows researchers to test the structure and content of a questionnaire on a one-on-one basis with the respondent. During these cognitive interviews, respondents were asked to "think aloud" while determining how to answer a question. This "think aloud" method allows researchers to uncover how respondents are interpreting each question. Further revisions to the questionnaire were made based on the results of these cognitive interviews.

The final stage of survey development was to pretest the revised instrument with live telephone interviews. A total of eleven completed interviews were administered,

¹ The panel members were: Prof. Glenn C. Blomquist, Dept. of Economics, Univ. of Ky; Prof. Colin Loftin, Criminal Justice, SUNY Albany; Prof. Gary F. Jensen, Sociology, Vanderbilt University; Dr. Deborah Faulkner, Nashville Police Dept.; Dr. Linda Drazga Maxfield, U.S. Sentencing Commission; Prof. Daniel S. Nagin, Public Policy, Carnegie-Mellon; Dr. Brian Jay Ostrom, National Center for State Courts; and Prof. Mark Warr, Sociology, Univ. of Texas.

with an average length of 27.5 minutes. Further modifications were made, primarily to shorten the length of the interview.

The final survey was programmed for computer assisted telephone interviews ("CATI"). This approach allowed for complex branches, single and multiple responses, open-ended text answers, and random rotation of text insertions for the vignettes. It also reduces the frequency of invalid data by not permitting answers that are outside the scope of the options provided in the question, while retaining the ability to allow respondents to answer "other" and specify their answers with text.

Telephone interviews were conducted with a sample that is representative of the entire United States population of adults age 18 or over. Interviews were conducted between May 16, 2000 and August 8, 2000. A random digit dial sample of 4,966 phone numbers yielded a total of 1,300 completed interviews – a 43% response rate. This response rate is based on a very conservative approach for measuring response rates for survey research. Using a method often reported in other studies, our response rate would be 58%.

The data are weighted to adjust for probabilities of selection and to adjust for non-response on age, sex, education and race. Results of this study can be projected to the population of people who are 18 years of age or older living in the fifty United States, including the District of Columbia. However, our sample has somewhat fewer low income individuals and Latinos, due to the inability of the study to contact individuals who do not have telephones and who do not speak English.

In addition to comparing our sample demographics to the U.S. population, we are able to compare some of their attitudes towards crime and other social ills. Several of the

introductory questions on the survey were patterned after the questions found in the 1998 General Social Survey ("GSS"). Thus, we asked respondents whether they thought we were spending too much, too little, or about the right amount on police and on drug treatment programs. Overall, our sample's responses are strikingly similar to the GSS responses.

The survey was designed with several checks to ensure that respondents understood the questions, could respond with some rationality and consistency, and were not biased by the wording of previous questions. In particular, we checked the news media for high profile criminal events that might influence the short-term response pattern of respondents and potential interviewer bias. We also designed the survey with several checks to ensure that the respondent understood the questions and that the responses followed some reasonable amount of logic and consistency.

B. Summary of Results

(1) Appropriate Punishment

The survey included 13 different scenarios that were analyzed using the traditional open-ended approach employed by Rossi and Berk (1995) and previous authors. The first five scenarios were early screener questions designed to ensure that the respondent could understand English and the questions; and thus the responses were limited to the in/out decision and length of prison (if any). The remaining 8 scenarios included numerous alternative sanction options.

Unlike previous studies that have had extensive factorial designs, we limited the number of factors to vary in order to increase the sample sizes that can be used for

comparison purposes. Our primary interest is in comparing and contrasting the traditional open-ended approach to the parole decision, examining constrained choices when there is fixed prison capacity, and other innovative methods of surveying the public. Thus, we limited the number of parameters to vary. In all cases but one, the offender was identified to be a 28 year-old single man. The exception was an instance of Medicare fraud, where the offender was a 40 year-old single man. These ages were set to the median age of convicted offenders.

(a) Screener Questions: In/Out and Deportation Decisions

Each respondent was asked two of five screener questions:

B1) A 28-year-old single man was convicted of robbing a bank at gunpoint and threatening to kill the teller if she did not give him the money in her drawer. He escaped with \$10,000. Prior to this offense, he had served 2 previous prison sentences each more than a year.

B2) A 28-year-old single man, a citizen of another country, was convicted of illegally entering the United States. Prior to this offense, he had served two previous prison sentences each more than a year. One of these previous sentences was for a violent crime and he had been deported back to his home country.

B3) A 28-year-old single man, a citizen of another country, was convicted of illegally entering the United States. Prior to this offense, he had never been imprisoned before.

B4) A 28-year-old single man was convicted of making 10 counterfeit driver's licenses that had his own picture on them, but used the names and Social Security numbers of other persons. He was caught before he could use these fake IDs. Prior to this offense, he had never been imprisoned before.

B5) A 28-year-old single man was convicted of making \$400 of counterfeit U.S. dollars on his home computer and printer. He tried to spend the counterfeit money at the shopping mall. Prior to this offense, he had never been imprisoned before.

In each case, respondents were asked first whether or not the offender should be sent to prison. If yes, a follow-up question asked for the preferred length of time. If the

respondent did not choose a prison sentence, an additional follow-up question was asked to elicit "why" no prison time was given. In the case of questions B2 and B3 (involving illegal aliens), if the respondent indicated that the offender should be deported, an additional follow-up was asked to determine whether or not a period of incarceration should precede deportation.

Table 1 reports on the results of the five screener questions. 99.3% of respondents chose prison for scenario 1, the bank robber with a prior record. The mean sentence length for that offender was nearly 18 ½ years. About 2/3 of respondents chose prison for the identify theft and counterfeiting offenders (neither of whom had prior criminal records), 65.3% and 63.2% respectively. The mean prison length for these offenders was 64.7 and 54.4 months respectively. These figures translate into an "expected sentence" of 41.3 months for the identity theft and 33.0 months for the counterfeiting crime.

A significant number of respondents preferred to deport the illegal immigrant rather than impose a prison sentence. For the illegal immigrant without any prior criminal record, 35.8% chose deportation, 24.4% chose prison, while 2.2% did not respond. The remaining 37.6% chose neither deportation nor prison. As shown in Table 2, when asked on follow-up, only a few respondents mentioned alternative sanctions for the illegal immigrant. Many indicated they should be allowed to stay in the U.S. and/or that illegal immigration should not be considered a crime.

For the last two crime scenarios - identity theft and counterfeiting, the largest percentage of individuals who did not call for a prison sentence suggested that an alternative sentence would be more appropriate (26.7% for identify theft and 43.8% for

Table 1
Decision to Incarcerate by Crime Scenario
(Section B - Screener Questions)

| Scenario | Prison ^a (%) | Don't know or refused question (%) | Avg. ^b sentence (months) | Expected ^c sentence (months) | 50+ years ^d or execute (%) | Deport ^e (%) |
|--|----------------------------|---|---|---|---|----------------------------|
| 1 - Bank robbery | 99.3 | .1 | 222.9 | 221.1 | 17.0 | N/A |
| 2 - Illegal immigration (prior criminal record) | 67.5 | 2.7 | 126.6 | 79.5 | 9.0 | 19.2 |
| 3 - Illegal immigration (no criminal record) | 24.4 | 2.2 | 48.3 | 10.4 | 1.2 | 35.8 |
| 4 - Identity theft | 65.3 | 1.2 | 64.7 | 41.3 | -- | N/A |
| 5 - Counterfeiting | 63.2 | .8 | 54.4 | 33.0 | 1.6 | N/A |

Note: Weighted sample size: Scenario 1 (657), Scenario 2 (624), Scenario 3 (643), Scenario 4 (333), and Scenario 5 (302).

^a Percentage calculated excluding "don't know" or refusals.

^b Includes only those sentenced to prison. Respondents who indicated sentence lengths of life in prison or greater than 50 years were recoded to be 600 months.

^c Includes all offenders, calculated as %Prison multiplied by mean sentence length.

^d Includes individuals sentenced to 600 or more months, life, or death penalty. Percentage calculated based on total who responded prison. Three individuals chose death penalty for scenario #1. One individual chose death penalty for scenario #2.

^e Determined from response to question asked of those who did not respond "yes" to prison. Percentage calculated relative to overall N.

counterfeiting). Many other individuals indicated that these crimes were "minor" or noted the fact that they were first time offenders. However, because these were open-ended questions, we do not know if these individuals would have preferred alternative sanctions or no sanction at all.

Table 2
Reasons Given for Not Incarcerating by Crime Scenario

| Reason for Not Sending to Prison (Based on Respondents Preferring "No Prison") | Scenario* | | | | |
|--|----------------|----------------|----------------|----------------|----------------|
| | B1 (%) | B2 (%) | B3 (%) | B4 (%) | B5 (%) |
| Percent of Response: "No Prison" | 0.7 | 32.5 | 75.6 | 34.7 | 36.8 |
| Percent of "Reasons" Given by those who Responded "No Prison" | Out of 100% |
| Deport | 0 | 55.9 | 47.0 | 0 | .1 |
| Shouldn't have to pay to incarcerate | 0 | 2.8 | 1.1 | 0 | .7 |
| Let him stay/everyone has right to be here | 0 | 2.7 | 2.7 | 0 | 0 |
| Land of opportunity/chance for better life | 0 | 8.1 | 16.2 | 0 | .3 |
| Rehabilitation | 0 | .3 | .7 | 1.7 | 1.1 |
| Offense not perceived as a crime | 0 | 6.4 | 7.1 | 15.7 | 1.1 |
| Offense perceived as very minor crime | 21.9 | 2.5 | 3.8 | 16.8 | 9.3 |
| Alternative sentence instead of prison | 26.0 | .8 | 2.4 | 26.7 | 43.8 |
| Not violent/not dangerous | 0 | 0 | 5.0 | 11.8 | 9.4 |
| First offense/no priors | 0 | 0 | 3.2 | 23.9 | 29.6 |
| Not enough information to answer | 15.7 | 3.1 | 2.2 | .6 | .4 |
| Other | 36.4 | 11.1 | 4.3 | 2.2 | 1.7 |
| Don't know | 0 | 1.7 | 1.7 | .4 | 2.6 |
| Refused | 0 | .4 | 0 | .2 | 0 |
| No answer | 0 | 4.4 | 2.7 | 0 | 0 |
| Weighted sample size. | (N=6) | (N=220) | (N=501) | (N=120) | (N=113) |

* Scenarios: B1=bank robbery with priors; B2=illegal immigrant with priors; B3=illegal immigrant, no priors; B4=identify theft, no priors; B5=counterfeiting, no priors.

(b) Main Scenarios with Alternative Sanctions: Unconstrained Decisions

The main scenarios used in the survey consisted of eight different crimes. Seven of these eight scenarios had a factorial design where 50% were written with no prior offenses, and the remaining 50% had offenders with "two previous prison sentences, each more than one year." One scenario involved a physician convicted of Medicare fraud. Since it would be unrealistic to have a physician with two prior offenses still being able to practice medicine, that scenario did not have a prior offense option. These eight scenarios were:

- 1) A 28-year-old, single man has been convicted of beating a stranger. No weapon was used. The victim was seriously injured, but will recover fully.
- 2) A 28-year-old, single man has been convicted of possession of 1 gram of cocaine, worth about \$150.
- 3) A 28-year-old, single man has been convicted, with several others, of taking part over a four-month period in selling marijuana. He was caught with 10 pounds of marijuana, worth about \$10,000. The offender was a street-level dealer who bought drugs from a wholesale dealer and sold directly to users.
- 4) A 28-year-old, single man has been convicted of robbing a 28 year old male stranger at gunpoint, stealing \$400 from him. The victim was not hurt.
- 5) A 28-year-old, single man has been convicted of robbing a 28-year-old [homosexual, black, Jewish] male at gunpoint, stealing \$400 from him. The victim was not hurt. The offender waited outside a [gay book store, black church, synagogue] to rob the first [gay, black, Jewish] person he saw.
- 6) A 28-year-old, single man has been convicted of breaking into a stranger's home and stealing \$500 when no one was home.
- 7) A 40-year-old single male doctor was convicted of submitting \$400,000 in false Medicare claims to the government.
- 8) A 28-year-old male was convicted of charging \$30,000 on credit cards stolen from strangers.

Note that scenario #5 is the identical underlying offense as scenario #4 - armed robbery of \$400 without injury. However, scenario #5 includes additional information indicating that the offender targeted a minority group for the crime. Thus, scenario #5 has an additional hate crime component and can be directly compared to scenario #4.

In each case, respondents were asked first whether or not the offender should be punished. If yes, a follow-up question was asked, "Which punishment or punishments would you choose?" The respondents were given the choice of, (a) prison, followed by supervision, (b) supervision, (c) payment of fine or restitution, or (d) electronic monitoring & home confinement. If the respondent requested a form of punishment not

listed, this was also recorded. In the case of prison or electronic monitoring, a follow-up was asked to determine the length of the sentence. In the case of a fine or restitution, the respondent was asked for the dollar amount.

Since multiple responses were permitted, there are numerous ways to report the results. Table 3 reports on the weighted distribution of preferred sentences for each of the 8 crime scenarios with no prior offenses, allowing for multiple responses. Thus, for example, 41.6% of respondents indicated that incarceration was warranted for the first scenario (assault) without prior offenses. The mean prison sentence for those who imposed one was 36.4 months. These figures can be converted into an “expected” prison sentence based on the probability of a prison sentence and the length of the sentence conditional on prison. Thus, an offender convicted of the first scenario has an “expected” prison sentence of 15.5 months (41.6% x 36.4 months = 15.5 months). Similar calculations are shown for home monitoring. In the case of assault with no prior offenses,

Table 3
Preferred Sentence for Offenders with No Prior Offenses
Multiple Response (Weighted)

| Scenario | N | Incarceration (months) | | | Home Monitor (months) | | | Fine | Superv. | Other |
|------------------------|-----|------------------------|------|------|-----------------------|------|-----|------|---------|-------|
| | | % | Avg. | Exp. | % | Avg. | Exp | % | % | % |
| 1 - Assault | 183 | 41.6 | 36.4 | 15.5 | 15.4 | 31.2 | 4.3 | 27.1 | 22.9 | 0 |
| 2 - Drug Poss. | 163 | 20.7 | 58.6 | 10.3 | 16.3 | 11.5 | 1.9 | 28.2 | 36.4 | 4.1 |
| 3 - Drug Deal. | 126 | 52.6 | 60.6 | 30.9 | 18.7 | 30.4 | 5.5 | 14.5 | 18.0 | 2.4 |
| 4 - Robbery | 154 | 51.2 | 37.0 | 19.0 | 17.6 | 24.8 | 4.4 | 26.1 | 18.4 | 1.7 |
| 5 - Robbery/Hate Crime | 172 | 59.9 | 40.5 | 24.4 | 9.6 | 15.7 | 1.4 | 21.5 | 15.2 | 2.8 |
| 6 - Burglary | 142 | 29.1 | 24.9 | 7.2 | 35.1 | 10.3 | 3.8 | 38.7 | 19.9 | 0.1 |
| 7 - Medicare fraud | 363 | 37.9 | 63.9 | 24.2 | 13.0 | 38.2 | 4.9 | 52.2 | 15.6 | 3.2 |
| 8 - Credit fraud | 156 | 43.2 | 26.9 | 11.4 | 20.5 | 18.4 | 3.8 | 49.0 | 13.2 | 0.8 |

Table 4
Preferred Sentence for Offenders with Prior Offenses
Multiple Response (Weighted)

| Scenario | N | Incarceration | | | Home Monitor | | | Fine | Super. | Other |
|-------------------------|-----|---------------|------|------|--------------|------|-----|------|--------|-------|
| | | % | Avg. | Exp. | % | Avg. | Exp | % | % | % |
| 1 - Assault | 152 | 63.4 | 58.3 | 38.9 | 14.8 | 27.4 | 4.1 | 22.2 | 13.1 | 2.0 |
| 2 - Drug Poss. | 177 | 55.4 | 46.4 | 21.2 | 21.1 | 15.8 | 3.3 | 12.7 | 17.4 | 0.6 |
| 3 - Drug Deal. | 150 | 71.5 | 64.0 | 45.3 | 12.2 | 30.4 | 3.7 | 14.1 | 6.2 | 0 |
| 4 - Robbery | 152 | 76.3 | 65.2 | 49.1 | 16.1 | 41.0 | 6.1 | 15.4 | 8.1 | 0.3 |
| 5 - Robbery Hate Target | 160 | 78.7 | 54.5 | 42.6 | 12.6 | 14.2 | 1.6 | 15.1 | 12.2 | 0.1 |
| 6 - Burglary | 173 | 70.4 | 61.2 | 42.2 | 11.3 | 18.5 | 2.1 | 23.3 | 11.9 | 0 |
| 8 - Credit fraud | 176 | 58.9 | 79.4 | 45.7 | 11.3 | 54.1 | 5.5 | 40.8 | 18.1 | 0 |

15.4% of respondents called for home monitoring, with the mean time being 31.2 months. Thus, the “expected” time in home monitoring is 4.3 months. Finally, 27.1% of respondents specified a fine and 22.9% supervision. Table 4 contains the same information for offenders with prior sentence.

Comparing Tables 3 and 4, it is clear that the public is in favor of a substantial increase in both the incarceration rate and the length of incarceration for repeat offenders. The percentage of respondents who prefer some period of incarceration is between 1.3 times and 2.7 times as high for repeat offenders as it is for first-time offenders. The largest difference is for drug possession, where 55.4% of respondents would incarcerate repeat offenders as opposed to only 20.7% who would incarcerate first-time offenders. A similar ratio holds for burglary, where 70.4% would incarcerate repeat offenders compared to only 29.1% who would incarcerate first time offenders.

Similar results are generally found when comparing the length of prison sentences for first-time versus repeat offenders – with the length of sentence generally being 1.3 to

2.9 times higher. The only exception is the case of drug possession where the first-time offender is actually sent away for a longer time – 58.6 months versus 46.4 months for the repeat offender. The reason for this apparent anomaly is the fact that only a small portion of respondents would send the first-time drug possession offender to prison (20.7%). However, those who would call for a prison sentence are also among those who would call for relatively lengthy sentences. For repeat drug possession offenders, the incarceration rate is now 46.4%, but those additional respondents who would now call for incarceration prefer much lower sentences. Combining the probability of incarceration with the length of sentence – to arrive at the “expected sentence” – yields results that are more in line with expectations. Thus, the “expected” time served for a first-time drug possession offender is 10.3 months, compared to 21.2 months for a repeat violator.

The other notable differences in sanctions for first-time versus repeat offenders is in the case of home monitoring for burglary (35.1% for first-time versus 11.3% for repeat offenders), and supervision for both drug possession (36.4% for first-time versus 17.4% for repeat violators) and drug dealing (18.0% for first-time versus 6.2% for repeat violators).

Tables 5 and 6 report the preferred sentence based on single responses, using a hierarchy whereby prison is deemed to be the most severe sanction, followed by home monitoring, fine, supervision and other. Thus, if a respondent preferred both prison and a fine, only the prison sentence is recorded in these tables. First, we report on the percentage of respondents that prefer no punishment. For example, 11.0% of respondents indicate no punishment is needed for the first time drug possession offender. 20.7% of respondents would impose a prison sentence (and possible other sanctions in combination

with prison).² Of those who want punishment and who do not want prison, 15.4% indicate home monitoring as the preferred sanction. An additional 20.7% indicate a fine, 28.8% supervision, 4.1% some other sanction, and 4.1% answered they did not know what the appropriate punishment should be. Note that if there are two columns labeled "don't know." The first one refers to the question of whether or not any punishment is warranted. The second "don't know" refers to individuals who said "yes" to punishment but could not determine what their preferred punishment should be.

The results in Tables 5 and 6 are similar to those in the multiple response tables above. However, by removing multiple responses, differences in the non-incarcerative sanctions become clearer. For example, while 16.2% of respondents would sentence first-time drug dealers to home monitoring, only 8.1% would impose home monitoring on repeat violators. This difference is even larger for burglary, where 34.1% would choose home monitoring as the primary punishment for the first time burglar, compared to only 7.6% who would use home monitoring for the repeat offender.

Although it is difficult to compare these responses to current sentencing practice without further details on the offense characteristics and detailed time-served data, it appears that the preferred sentences by our survey respondents are slightly less harsh than current practice. Table 7 compares the survey responses to felony sentences in large urban counties. For example, 41.6% of our respondents would sentence the assault offender without a prior conviction to prison or jail. However, 72% of first time felony offenders without a prior conviction receive some prison or jail time (BJS, 1999, Table

² Note that this 20.7% is the same as in Table IV-5, since prison is the highest category. Thus, the percent going to prison is always the same in the multiple response and single response tables.

Table 5
Preferred Sentence for Offenders with No Prior Offenses
Single Response (Weighted)

| Scenario | N | Punish? | | Incarceration (months) | | | Home Monitor (months) | | | Fine % | Superv. % | Other % | Don't Know % |
|------------------------|-----|---------|--------------|------------------------|------|------|-----------------------|------|------|--------|-----------|---------|--------------|
| | | % No | Don't Know % | % | Avg. | Exp. | % | Avg. | Exp. | | | | |
| 1 - Assault | 183 | 4.9 | 2.2 | 41.6 | 36.4 | 15.5 | 14.3 | 32.2 | 4.2 | 23.5 | 15.6 | 0 | 0.2 |
| 2 - Drug Poss. | 163 | 11.0 | 0 | 20.7 | 58.6 | 10.3 | 15.1 | 9.5 | 1.4 | 20.7 | 28.8 | 4.1 | 4.1 |
| 3 - Drug Deal. | 126 | 5.6 | 0 | 52.6 | 60.6 | 30.9 | 16.2 | 31.4 | 5.2 | 8.6 | 13.3 | 2.4 | 1.7 |
| 4 - Robbery | 154 | 3.2 | 0 | 51.2 | 37.0 | 19.0 | 14.6 | 27.3 | 4.0 | 17.7 | 10.9 | 1.7 | 1.4 |
| 5 - Robbery/Hate Crime | 172 | 3.6 | 0.1 | 59.9 | 40.5 | 24.4 | 9.5 | 16.2 | 1.3 | 16.7 | 6.3 | 2.8 | 2.2 |
| 6 - Burglary | 142 | 0.1 | 0.1 | 29.1 | 24.9 | 7.2 | 34.1 | 10.4 | 3.7 | 23.3 | 9.5 | 0.1 | 3.9 |
| 7 - Medicare fraud | 363 | 3.0 | 1.9 | 37.9 | 63.9 | 24.2 | 12.2 | 39.2 | 4.7 | 36.6 | 7.5 | 3.2 | 0.1 |
| 8 - Credit fraud | 156 | 0 | 0 | 43.2 | 26.9 | 11.4 | 18.0 | 15.6 | 2.8 | 29.6 | 7.7 | 0.8 | 1.3 |

Table 6
Preferred Sentence for Offenders with Prior Offenses
Single Response (Weighted)

| Scenario | N | Punish? | | Incarceration (months) | | | Home Monitor (months) | | | Fine % | Superv. % | Other % | Don't Know % |
|------------------------|-----|---------|--------------|------------------------|------|------|-----------------------|------|------|--------|-----------|---------|--------------|
| | | % No | Don't Know % | % | Avg. | Exp. | % | Avg. | Exp. | | | | |
| 1 - Assault | 152 | 2.6 | 2.6 | 63.4 | 58.3 | 38.9 | 10.3 | 24.4 | 2.7 | 8.4 | 8.9 | 2.0 | 4.5 |
| 2 - Drug Poss. | 177 | 6.2 | 1.1 | 55.4 | 46.4 | 21.2 | 15.5 | 11.8 | 1.9 | 8.3 | 14.5 | 0.6 | 0 |
| 3 - Drug Deal. | 150 | 8.7 | 0 | 71.5 | 64.0 | 45.3 | 8.1 | 18.3 | 1.5 | 7.5 | 3.4 | 0 | 0.8 |
| 4 - Robbery | 152 | 0.6 | 0.6 | 76.3 | 65.2 | 49.1 | 12.2 | 43.7 | 4.8 | 6.7 | 3.9 | 0.3 | 0 |
| 5 - Robbery/Hate Crime | 160 | 0.6 | 0 | 78.7 | 54.5 | 42.6 | 9.1 | 14.4 | 1.3 | 3.2 | 7.2 | 0.1 | 0.6 |
| 6 - Burglary | 173 | 0.3 | 0.3 | 70.4 | 61.2 | 42.2 | 7.6 | 20.8 | 1.6 | 15.1 | 6.4 | 0 | 0 |
| 8 - Credit fraud | 176 | 0 | 0 | 58.9 | 79.4 | 45.7 | 11.3 | 54.1 | 5.5 | 25.3 | 4.4 | 0 | 0.1 |

35). For violent offenders with two or more prior felony convictions, while 91% currently receive jail or prison time, only 63.4% of our respondents sentenced the assault offender with two prior sentences to prison or jail. Respondents are particularly less harsh on drug

offenders. While 55% of all first time drug offenders (including both possession and dealing) receive a sentence of incarceration, respondents sent only 20.7% of first time drug possession offenders and 52.6% of offenders with two prior convictions to jail or prison.

Table 7
Comparison of Survey Incarceration Rate vs. Felony Sentences in U.S.

| | Total Incarceration % | Prison % | Jail % |
|--|-----------------------|-----------|-----------|
| <u>No Prior Convictions</u> | | | |
| - Violent Offenses (BJS) | 72 | 40 | 32 |
| - Assault (scenario 1) | 41.6 | 21.4 | 19.9 |
| - Robbery (scenario 4) | 51.2 | 29.0 | 21.0 |
| - Robbery/Hate Crime (scenario 5) | 59.9 | 42.0 | 15.2 |
| - Property Offenses (BJS) | 39 | 11 | 28 |
| - Burglary (scenario 6) | 29.1 | 12.5 | 14.8 |
| - Drug Offenses - All (BJS) | 55 | 19 | 36 |
| - Drug Possession (scenario 2) | 20.7 | 10.2 | 6.8 |
| - Drug Dealing (scenario 3) | 52.6 | 32.6 | 15.0 |
| <u>Two Prior Convictions/Sentences*</u> | | | |
| - Violent Offenses (BJS) | 91 | 71 | 20 |
| - Assault (scenario 1) | 63.4 | 43.6 | 15.4 |
| - Robbery (scenario 4) | 76.3 | 59.1 | 11.6 |
| - Robbery/Hate Crime (scenario 5) | 78.7 | 64.6 | 9.9 |
| - Property Offenses (BJS) | 83 | 58 | 25 |
| - Burglary (scenario 6) | 70.4 | 55.4 | 9.9 |
| - Drug Offenses - All (BJS) | 85 | 55 | 30 |
| - Drug Possession (scenario 2) | 55.4 | 33.7 | 14.6 |
| - Drug Dealing (scenario 3) | 71.5 | 62.5 | 4.4 |

Source: BJS: 1999, p. 35. Sentences of 12 months or less are assumed to be "jail" and those greater than 12 months are prison. "Total incarceration" includes those who do not specify length of prison; thus last two columns do not add up to the first.

* Actual sentencing data based on offenders with more than one felony conviction. Survey based on two prior sentences of more than one year in prison.

(2) Parole Decisions

Sentencing decisions are not made in isolation. Lawmakers or Sentencing Commissions must consider budgets, prison capacity and perhaps other social problems that need to be addressed in making budget allocation decisions. Parole officers might have to consider externally imposed goals of relieving prison overcrowding in deciding which whether or not to grant early release. Despite these constraints, prior public opinion surveys have naively asked respondents what the appropriate sentence should be irrespective of prison overcrowding, budgetary priorities, etc. According to the authors of one such study, "Public preferences about punishment are largely unconstrained by the consequences associated with those choices...no state could afford to pursue a policy of totally satisfying the public demand for punishment" (Zimmerman et al., 1988: 147). Previous studies have an important methodological shortcoming - they ask open-ended questions and do not ask respondents to consider many of the tradeoffs inherent in real world sentencing decisions.

To begin to explore the public's attitude towards sentencing under more realistic settings, we asked respondents to consider one of the eight crime scenarios described above. However, respondents were also told how long the offender has already served in prison - based on an estimate of the average time served in the U.S. for each respective crime.

Table 8 reports on parole decisions for each of the eight scenarios - separately for those who were indicated to have no prior convictions and those with two priors. In all of the street crimes (scenarios 1-6), more than 50% of respondents would parole the offender without prior convictions by the stated time served. The smallest percentage -

Table 8
Parole Decision

| Scenario | Time Served in Survey (months) | No Prior Convictions | | | Prior Convictions | | |
|------------------------|--------------------------------|----------------------|-------------|---------------------------|-------------------|-------------|---------------------------|
| | | N | % "Let out" | % "Refused or Don't Know" | N | % "Let out" | % "Refused or Don't Know" |
| 1 - Assault | 24 | 458 | 63.3% | 5.1% | 506 | 27.8% | 5.7% |
| 2 - Drug Poss. | 12 | 483 | 79.8% | 2.9% | 476 | 42.0% | 6.9% |
| 3 - Drug Deal. | 24 | 527 | 52.8% | 5.2% | 498 | 27.3% | 2.7% |
| 4 - Robbery | 42 | 501 | 63.8% | 5.1% | 492 | 25.0% | 4.5% |
| 5 - Robbery/Hate Crime | 42 | 498 | 61.9% | 2.9% | 470 | 25.8% | 4.8% |
| 6 - Burglary | 18 | 496 | 74.2% | 5.1% | 489 | 22.1% | 4.6% |
| 7 - Medicare fraud | 12 | 937 | 34.2% | 2.9% | --- | ----- | ----- |
| 8 - Credit fraud | 12 | 506 | 41.9% | 5.2% | 461 | 14.3% | 2.4% |

Note: Weighted sample. "% Let Out" is based on those who responded either yes or no.

52.8% of respondents would parole the drug dealer (scenario 3) after 24 months in prison, while the largest percentage, 79.8%, would parole the offender who spent one year in prison for drug possession. In contrast, none of the repeat offenders had a 50% parole rate. Only 22.1% of respondents would parole the burglar after 18 months, and only 27.3% would parole the drug dealer after 24 months. The largest percentage was once again for drug possession, with 42% agreeing to parole the drug possession offender who had two prior convictions after serving one year in prison.

In contrast to the street crimes, the white-collar offenders were less likely to be paroled after their current time-served. As shown in Table 8, only 34.2% would parole the Medicare offender after one year, and 41.9% would parole the first time offender convicted of credit card fraud after one year. For the credit card fraud offender with prior convictions, only 14.3% of respondents would grant parole after one year.

Care must be taken in interpreting the results of Table 8, since we did not vary the time-served by prior offenses. Thus, the finding that 74.2% of respondents would parole a first-time burglar after 18 months does not necessarily mean that the public believes current sentencing practice is too harsh. The 18 months is an average over all burglary offenders - regardless of prior offenses.

(3) Crime Prevention and Control Strategies

The survey had two sets of questions eliciting "willingness-to-pay" valuations from respondents. This section analyzes the first set of questions, where respondents are asked about their willingness to forego a tax rebate in exchange for programs that are designed to prevent or punish crimes. The question asks respondents to put themselves in the shoes of their local mayor who has just received a grant from the Federal government equal to either \$100 or \$1000 per household. The respondent is asked to decide how to allocate that money among four different crime control programs: (1) more prisons, (2) more drug and alcohol treatment programs for offenders convicted of nonviolent crime, (3) more police on the street, and (4) more prevention programs to help keep youth out of trouble. A fifth alternative is to return all or part of this money back to local residents.

Table 9 reports on the mean and median percentage amounts allocated to each of the five options. Very little of this money would go to either prisons or a tax rebate. Instead, the largest percentage - 36.6% - would go to prevention programs designed to help keep youth out of trouble. Drug treatment and police would each receive between 21%-22% of the money; 8.4% of the dollars would go to prisons; and 11.9% would go to

Table 9
Percent of Tax Rebate Dollars Allocated to Crime Prevention

| | Mean | Median | Implied Value of Program |
|----------------|-------|--------|--------------------------|
| Prison | 8.4% | 0.0% | \$0.71 |
| Drug Treatment | 22.1% | 25.0% | \$1.86 |
| Police | 21.0% | 20.0% | \$1.76 |
| Prevention | 36.6% | 33.3% | \$3.07 |
| Tax Rebate | 11.9% | 0.0% | \$1.00 |
| | | | |
| Sample size | 1234 | 1234 | 1234 |

Note: Weighted sample used. Excludes refusals, don't knows, and responses that did not add up to 100%.

a tax rebate. The "median" allocations were 25% each for drug treatment and police, 33.3% for prevention programs, and zero for prisons and the tax rebate.

The last column of Table 9, converts the mean percentages into an implied valuation of each program relative to a tax rebate. For example, since 22.1 cents of every dollar would be spent on drug treatment, and 11.9 cents on a tax rebate, the value of \$1.00 of drug treatment relative to a \$1.00 tax rebate is \$1.86 ($22.1 / 11.9 = 1.86$). Thus, the average value of a taxpayer dollar is only about 71 cents when spent on prison, but

\$3.07 when spent on prevention. That is, at the margin, the public is indifferent between a \$1 tax rebate and \$3 spent on prevention.

There are only slight differences in these preferences across demographic groups. As shown in Table 10, males would allocate more to tax rebates (13.8% versus 10.1%) and less to drug treatment programs (20.7% to 23.5%) than women. Blacks would spend less of these funds on prison (4.4% versus 9.0%), less on police (18.1% versus 21.6%),

Table 10
Percent of Tax Rebate Dollars Allocated to Crime Prevention
By Gender, Race and Ethnicity

| | Male | Female | | White | Black | | Latino |
|----------------|-------|----------|--|-------|----------|--|--------|
| Prison | 8.5% | 8.3% | | 9.0% | 4.4%*** | | 10.0% |
| Drug Treatment | 20.7% | 23.5%*** | | 22.0% | 23.8% | | 20.0% |
| Police | 21.0% | 21.0% | | 21.6% | 18.1%** | | 19.5% |
| Prevention | 36.0% | 37.2% | | 35.7% | 44.3%*** | | 32.3% |
| Tax Rebate | 13.8% | 10.1%*** | | 11.8% | 9.4% | | 18.4% |
| Sample size | 596 | 638 | | 1003 | 144 | | 58 |

significant at $p < .05$ * significant at $p < .01$

Note: Significance levels refer to t-test comparing Male versus Female and White versus Black responses. None of the White versus Latino differences were statistically significant. Additional ANOVA test finds similar significance levels.

Note: Weighted sample used. Excludes refusals, don't knows, and responses that did not add up to 100%.

and less on a tax rebate (9.4% versus 11.8%). However, blacks would spend more on youth prevention programs (44.3% versus 35.7%). Latinos would spend slightly lower amounts on drug treatment, police, and prevention programs, and instead spend more (18.4% versus 11.8%) on a tax rebate.

Surprisingly, there were virtually no differences among income categories. In fact, the lowest income levels (under \$15,000) had remarkably similar responses to these questions as those with the highest income level, over \$75,000. This was true both for the

\$100 and the \$1000 rebate. Only slight differences appear between cities or suburbs and rural areas.

It is important to keep in mind that these results are **marginal** and do not necessarily represent the public's view of the appropriate allocation of **total** resources for these different programs. Thus, while we know that there is little support for spending more money on prisons, for example, these findings do not tell us whether the public believes there is currently too much or the right amount of money being spent on prisons. It is also worth noting that these results appear to be consistent with growing public sentiment towards drug treatment instead of incarceration, as witnessed by passage of Proposition 36 in California.³

(4) Willingness to Pay for Reduced Crime

The final section of the study contained a series of questions eliciting "willingness-to-pay" valuations from respondents. In the previous section (Part 3 of the survey), respondents were asked to allocate a transfer of funds from the Federal government to their local government and could apply all of that money to a tax rebate. In this section (Part 4 of the survey), respondents are asked to allocate their own **additional** money to crime prevention programs. Whereas the purpose of Part 3 was to elicit preferences for government funding priorities, the purpose of Part 4 is to elicit specific valuation of crime estimates.

Benefit-cost analyses have become a routine tool in the development of environmental, health and safety regulations. Criminal justice researchers and policy

³ "Substance Abuse and Crime Prevention Act," November 2000 (Proposition 36), calls for increased use of drug treatment in lieu of incarceration.

makers are beginning to use benefit-cost analysis as well. Among the programs studied using benefit-cost analysis include longer prison sentences, prison overcrowding, rehabilitation programs, and juvenile intervention programs.

One of the major limitations of benefit-cost analysis in the criminal justice arena is the paucity of data on the costs of crime (or benefits of crime reduction). Cohen (1988) has provided one methodology based on jury awards and economic studies of the value of a statistical life. That approach was also used in a study commissioned by the National Academy of Sciences (Cohen, Miller and Rossman, 1994), and in subsequent NIJ-funded studies (Miller, Cohen and Wiersema, 1996; Cohen, 1998) that have been widely cited in the press. Despite their growing acceptance and use by other researchers, these earlier approaches are not without controversy - both on theoretical and empirical grounds. The main theoretical criticism has been that the previous approach is based on an "ex post" compensation criterion, whereas benefit-cost analysis is generally conducted on an "ex ante" willingness-to-pay approach. Since the amount people are willing to pay to avoid a social ill is generally less than the amount of money they would require to voluntarily accept it, there is concern that the previous method overestimates the cost of crime. The main empirical concern with the previous methodology is that it is based primarily on jury awards to victims, and hence is subject to the emotional and potentially irrational behavior of juries. These issues are addressed in more detail in Cohen (2000) and Cohen (2001).

One of the goals of this research project was to explore the feasibility of an alternative methodology - a "contingent valuation" survey of crime. The contingent valuation survey is a methodology developed in the environmental economics literature

and has been used extensively to place dollar values on nonmarket goods such as improvements in air quality, saving endangered species, and reducing the risk of early death.

Respondents were asked if they would be willing to vote for a proposal that would require each household in their community to pay a certain amount that would prevent one in ten crimes in their community. They were randomly given three out of five crimes: (1) burglary, (2) serious assaults, (3) armed robbery, (4) rape or sexual assault, and (5) murder. The actual text of the survey follows:

Now I want to ask you how much of your own money you would be willing to pay to reduce certain crimes. In each case, I am going to ask you to vote "yes" or "no" to a proposal that would require your household and each household in your community to pay money to prevent crime in your community.

Remember that any money you agree to spend on crime prevention is your money that could otherwise be used for your own food, clothing, or whatever you need. Unlike the previous question, where the government was planning to give you money back, now I want you to think about actually taking more money out of your pocket.

Last year, a new crime prevention program supported by your community successfully prevented one in every ten [INSERT CRIME] from occurring in your community. Would you be willing to pay [INSERT AMOUNT] per year to continue this program?

The amounts inserted into the text were randomized between \$25 and \$200 (in \$25 intervals). Once an amount was chosen for a particular respondent, that same amount was used for all three crime types for that respondent. If the respondent answered "yes" to the amount, the amount was increased by \$25 and the respondent was asked, "Would you be willing to pay...?" If the initial answer was "no," the amount was reduced by \$25 and the question was asked again. (In the case that the initial bid level was \$25 and the initial answer was "no," the respondent was asked on follow-up if she would be willing to

pay \$10.) Following the second bid level, the respondent was asked, "And can you please explain why you [would be willing/would not be willing/don't know if you'd be willing] to pay \$[insert amount]?" The verbatim response was recorded.

Table 11 reports on the weighted percentage of respondents who indicated they were willing to pay the specified "bid" amount to reduce each particular type of crime. The majority of respondents were willing to pay up to \$100 per year for these crime

Table 11
Percent of Respondents Willing to Pay for Reduced Crime
(Weighted)

| Initial Bid | Armed Robbery | Serious Assaults | Burglaries | Rape | Murder |
|-------------|---------------|------------------|------------|------|--------|
| \$ 25 | 56% | 60% | 56% | 69% | 75% |
| 50 | 60% | 71% | 59% | 61% | 58% |
| 75 | 58% | 61% | 62% | 66% | 77% |
| 100 | 51% | 47% | 44% | 56% | 73% |
| 125 | 52% | 49% | 34% | 42% | 59% |
| 150 | 48% | 56% | 50% | 59% | 63% |
| 175 | 50% | 51% | 47% | 72% | 61% |
| 200 | 38% | 57% | 51% | 56% | 60% |
| 225 | 41% | 35% | 27% | 59% | 46% |

reduction programs. At the lowest bid level of \$25, 75% of respondents were willing to pay this amount to reduce murder, 69% for rape, 60% for serious assaults, and 56% each for burglary and armed robbery. At the highest bid level of \$225, rape now has the highest percentage willing to pay, with 59%; followed by murder, 46%; robbery, 41%; assault, 35%; and burglary, 27%. Note that we have recoded all "don't know" and "refused" responses to be "no." This is not only a conservative approach to estimating willingness-to-pay, but it is also consistent with a voting model where a decision on whether or not to fund a crime prevention program is contingent upon a majority vote.

Those who do not express an opinion are not counted in such a vote.

The percentage responding yes or no to each bid level can be converted into an estimated minimum willingness-to-pay. These amounts, shown in Table 12, are the minimum amounts that the average respondent will pay per year for a 10% reduction in the specified crime. The mean willingness-to-pay ranges from \$83 annually per household for a 10% reduction in burglary to \$138 for a 10% reduction in either rape or

Table 12
Willingness-to-Pay to Reduce Crime by 10%

| | Mean |
|-------------------------|-------|
| Burglary | \$83 |
| Armed robbery | \$101 |
| Serious Assaults | \$104 |
| Rape and Sexual Assault | \$120 |
| Murder | \$138 |

murder. The 95% confidence intervals around these estimates are generally plus or minus 10-20%.

These figures can be converted into an implied "cost per crime" based on the number of crimes and households in the U.S. Table 13 calculates the implied willingness-to-pay per crime. To calculate this amount, we start with the 10% reduction in crime, for example, 371,197 burglaries. Since the average household is willing to pay \$83 for a program that reduces burglaries by 10% and there are 103 million households in the U.S., collectively \$8.5 billion would be spent on such a program ($\$83 \times 103 \text{ million} = \8.5 billion). Dividing this figure by the 371,197 crimes averted yields willingness-to-pay per crime of \$23,000. Similar calculations yield estimates for serious assaults (\$60,000), armed robbery (\$213,000), rape and sexual assaults (\$225,000) and murder (\$9.1

million). The last two columns of Table 13 report on the 95% confidence intervals for these estimates.

Table 13
Implied Willingness-to-Pay per Crime

| Crime | 10% Crime Reduction | WTP for 10% Reduction | Implied WTP per Crime | 95% Confidence Interval | |
|--------------------------|---------------------|-----------------------|-----------------------|-------------------------|---------------|
| | | | | | |
| Burglary | 371,197 | \$83 | \$ 23,000 | \$ 17,500 | \$ 29,000 |
| Armed robbery | 39,994 | \$101 | \$ 213,000 | \$ 162,000 | \$ 285,000 |
| Serious Assaults | 177,836 | \$104 | \$ 60,000 | \$ 45,000 | \$ 79,000 |
| Rape and Sexual Assaults | 54,747 | \$120 | \$ 225,000 | \$ 172,000 | \$ 303,000 |
| Murder | 1,553 | \$138 | \$ 9,100,000 | \$ 8,000,000 | \$ 10,400,000 |

Note: See full report for details of calculations.

Table 14 compares these estimates to prior cost of crime estimates, based on combined victim costs from Miller, Cohen and Wiersema (1996) and criminal justice-related costs from Cohen (1998) inflated 2000 dollars.⁴ In all cases, the estimates from the contingent valuation survey are higher than the prior estimates, ranging from 1.5 to 9 times higher. The estimates for serious assaults, rape and sexual abuse, and murder are between 1.5 and 2.5 times higher. Armed robbery and burglary are between 5-9 times higher. Note that the estimate for murder (\$8.0 to \$10.4 million) is at the upper end of the range of Viscusi's (1998) most recent range for the value of a statistical life, between \$3 million and \$9 million.

⁴ An inflation factor of 1.27 was used for 1993 to 2000 dollars for victim costs and 1.12 for 1997 to 2000 dollars for criminal justice costs, based on the growth in hourly wages for the typical hourly worker in the U.S. as reported by the Bureau of Labor Statistics, (<http://www.bls.gov/webapps/legacy/cesbt4.htm>). Admittedly, this is a relatively crude approach to updating the cost of crime estimates - since it assumes the distribution of injuries in the crimes committed during the 1987-90 time period used by Miller, Cohen and Wiersema (1996) is unchanged in 2000. In addition, while the inflation factor is based on wages, a portion of the cost of crime in Miller, Cohen and Wiersema includes medical losses and lost quality of life.

Table 14
Comparison of Implied Willingness-to-Pay to Previous Estimate of Crime Cost

| Crime | Prior Estimates | | | Current Study | | Ratio (Current to Prior) | |
|--------------------------|-----------------|------------------------|------------|---------------|---------------|-----------------------------|------|
| | Victim Costs | Criminal Justice Costs | Total Cost | Low | High | Low | High |
| Burglary | \$1,780 | \$2,580 | \$3,360 | \$ 17,500 | \$ 29,000 | 5.2 | 8.6 |
| Armed robbery | \$24,100 | \$7,730 | \$31,800 | \$ 162,000 | \$ 285,000 | 5.1 | 9.0 |
| Serious Assaults | \$30,480 | \$5,150 | \$35,600 | \$ 45,000 | \$ 79,000 | 1.3 | 2.2 |
| Rape and Sexual Assaults | \$110,490 | \$3,250 | \$114,000 | \$ 172,000 | \$ 303,000 | 1.5 | 2.7 |
| Murder | \$3.7 mil. | \$183,000 | \$3.9 mil. | \$ 8,000,000 | \$ 10,400,000 | 2.1 | 2.7 |

Note: Victim costs taken from Miller, Cohen and Wiersema, updated to 2000 dollars.

“Armed robbery” is based on the “Robbery with injury” category in Miller, Cohen & Wiersema, and “Serious Assaults” is based on the “Assault with injury” category. Criminal justice costs are based on the probability that an offender will be detected and punished, and are based on Table 3 of Cohen (1998). See text.

Theoretically, some economists have argued that the WTP estimates should be smaller since they are based on *ex ante* estimates and they are willingness-to-pay, compared to prior estimates that are *ex post* compensation (willingness-to-accept) measures. At this point, we can only conjecture why the implied WTP estimates are significantly higher than previous cost of crime estimates. Part of the reason might simply be due to lack of information by survey respondents about the magnitude and severity of current crime rates. Thus, for example, if the typical survey respondent overestimated their risk of being a crime victim, they would tend to overstate their willingness-to-pay to

reduce crime. Future studies should provide more background information and context to ensure that the responses truly reflect public opinion.

Another possible explanation for the higher estimates using the contingent valuation method, however, is that prior estimates were too small. As Nagin (2001a and 2001b) has noted, the prior estimates of Cohen (1988) and Miller, Cohen and Wiersema (1996) are based on the cost to one individual - and thus ignore the external social costs associated with crime that are endured by people other than victims. In particular, they ignore the reduced quality of life to neighborhoods, non-victims, and society in general. Since the survey asked people to consider a 10% reduction in crime - not a single crime - respondents might reasonably consider the external benefits to non-victims. A study by Anderson (1999) estimates and aggregates many of these external costs, including the cost of the criminal justice system, private security costs, the opportunity cost of time spent by people in locking homes and other prevention measures, etc. Anderson estimates the aggregate burden of crime to be between \$1.1 and \$1.7 trillion, compared to the \$450 billion of victim costs estimated by Cohen, Miller and Wiersema (1996) - about three to four times victim costs. Thus, the per-crime figures estimated here are plausible and consistent with the Anderson study and Nagin critique of earlier crime cost estimates.

Although we are reluctant to use the new WTP estimates as the definitive "cost of crime" in policy analysis, our findings suggest that prior estimates of the cost of crime are too low. Until further refinements improve upon the estimates reported here, researchers should conduct sensitivity analysis using both the prior estimates in Miller, Cohen and Wiersema (1996) and those presented here. A sensitivity analysis is important because

one can otherwise draw incorrect policy conclusions using estimates that are either too high or too low.

Existing cost-benefit analyses often use the victim cost figures in Miller, Cohen and Wiersema (1996). For example, Levitt (1997) found that increased hiring of police reduces crime. However, based on the cost of hiring a sworn officer and the monetary value of crimes averted, he concluded that only in one of his model specifications did the benefits unequivocally exceed the costs. Thus, while Levitt was particularly cautious about drawing policy conclusions from his analysis, the case for more police officers would be significantly strengthened if these new crime cost estimates were substituted in his benefit-cost ratios.

As another example of how these new cost estimates can affect policy debates, Cohen (1998) estimated that the typical high risk youth that follows a life of crime causes \$1.3 to \$1.5 million (1997 dollars) in crime-related costs including victim costs, productivity losses and criminal justice related costs. Using the WTP estimates from this study instead of the crime cost estimates used in Cohen (1998), we calculate that this figure would increase to between \$2.8 and \$3.3 million (2000 dollars) using the point estimates, or \$2.1 and \$4.4 million using the 95% confidence intervals.

Perhaps more importantly, this project has demonstrated the viability of using the contingent valuation method for estimating the costs of crime. Further refinements should focus on clearly articulating the risks and consequences of victimization to survey respondents, and in expanding the scope of crimes.

C. Summary of Results and Future Research Implications

This study tested several new methodologies designed to elicit meaningful public input on criminal justice policy issues such as the appropriate sentence for convicted offenders, the parole decision, allocation of government funds towards crime prevention programs, and the public's willingness to pay to reduce crime. While the study objectives were largely to pilot test new approaches to eliciting meaningful information from public surveys – and were not focused on broad policy conclusions – we found several overriding themes that cut across our survey findings and have broad policy implications. **Overall, we found strong support for spending more money than currently to reduce crime below current levels. Much of that support is for increased prevention programs targeted at high-risk youth, more police on the street, and for drug treatment programs for nonviolent offenders, as opposed to more prisons. The public largely concurs with current sentencing decisions about incarceration and sentence length - with the exception of certain crimes – particularly drug offenses (which the public believes are dealt with too harshly) and certain white collar crimes (which the public believes are not dealt with harshly enough).**

More specific policy relevant implications we can draw from our nationally representative sample of 1300 U.S. residents, include:

- (1) The public's preferred incarceration rate for most street crimes appeared to be largely consistent with - but slightly less harsh than current practice.
- (2) The public's preferred incarceration rate for drug crimes appeared to be consistently lower than current practice.

- (3) There was little support for enhancing the sentence of a hate-crime motivated robbery beyond the punishment for a generic robbery.
- (4) There was little support for the imprisonment of illegal aliens who do not have a prior criminal record in the U.S. Only 24.4% of respondents deemed prison to be an appropriate punishment. 35.8% of respondents called for deportation.
- (5) Offenders without any prior criminal record who are convicted of crimes of identity theft and counterfeiting of currency are deemed worthy of prison, with about 2/3 of respondents calling for prison terms of an average length between 4 and 5 years.
- (6) When confronted with the option of a tax rebate or spending more on crime prevention programs, the majority of respondents would allocate money to either high-risk youth programs (36.6%), drug treatment for nonviolent offenders (22.1%), or police (21.0%). Little additional money would be spent on prisons (8.4%). Only 11.9% would be allocated to a tax rebate.
- (7) The typical household would be willing to pay between \$75 and \$150 per year for crime prevention programs that reduced crimes by 10% in their communities. In the aggregate, these amounts imply a willingness to pay to reduce crime of about \$23,000 per burglary, \$60,000 per serious assault, \$213,000 per armed robbery, \$225,000 per rape and sexual assault, and \$9.1 million per murder. These figures represent average values across the U.S. and might not necessarily apply to the value that members of any one community might place on crime in their area.

The study raised numerous questions for future research. While previous authors have found open-ended questions on the appropriate sentence for convicted offenders to result in sanctions that were overly punitive, we found responses to be largely in line with current sentencing practice. We also designed a series of questions focused on the parole decision in order to make the scenario more realistic. This approach yielded mixed results. Although the parole decisions were largely consistent with the open-ended in/out decisions, some inconsistencies were noted. In particular, there appears to be an anchoring effect for some crimes - whereby the sentences are lengthened beyond current time-served. For example, while a majority of respondents might not want to impose incarceration on a first time fraud violator, a majority would refuse to parole a fraud offender who has already spent 12 months in prison. This suggests that future studies need to carefully specify the details of the crime and offender as well as provide more contexts for the sentencing decision.

The results of the pilot study of willingness-to-pay provide support for continuing this line of research. Respondents appeared to be able to distinguish between crime types and vary their willingness-to-pay accordingly. Preliminary estimates of the cost per crime using this methodology appear to be reasonable. However, since this was a pilot study, it could only elicit information on broad crime categories and was unable to provide details on each crime. Future studies that attempt to refine the contingent valuation methodology should pay close attention to providing clear definitions and some understanding of the baseline risks and consequences for each crime type evaluated.

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