

Money from Crime

A Study of the Economics of Drug Dealing in Washington, D.C.

Peter Reuter, Robert MacCoun,
Patrick Murphy

RAND

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with Allan Abrahamse, Barbara Simon

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**DRUG POLICY
RESEARCH CENTER**

PREFACE

This is the final report of a study of drug distribution in the District of Columbia. The study was commissioned by the Rockefeller Foundation in support of its funding of the Committee on Strategies to Reduce Chronic Poverty. Additional funding came from RAND's Drug Policy Research Center, which is supported by The Ford and the Weingart Foundations.

The study's purpose is to illuminate the role of drug selling in the economic life of persons at risk of long-term poverty. It provides new data on the characteristics of those who are caught selling drugs in the District of Columbia and on the earnings from such selling. The data and analyses should be of interest to those concerned with drug policy and urban poverty.

Allan Abrahamse carried out the statistical analysis in Sec. III. Robert MacCoun is the principal author of Sec. IV and App. C and collaborated on the writing of Sec. VI. Paul Brounstein of The Urban Institute carried out the analyses in Sec. V. Barbara Simon wrote App. B and directed the fieldwork that provided the data in Sec. IV. Patrick Murphy is the author of App. D. Peter Reuter is the author of the remainder of the report.

SUMMARY

The rapid growth of street drug markets, particularly for crack cocaine, has apparently provided a new set of highly paid, albeit risky, illegal earnings opportunities for young persons with poor prospects in the legitimate job market. This phenomenon has been particularly striking in urban areas characterized by a high incidence of poverty and social disorder. Some observers fear that increasing involvement in drug selling will lead to fewer young males from poor urban communities completing high school and to lower work force attachment. As sellers become accustomed to high incomes and acquire expensive drug dependencies, the high returns from drug selling may further complicate the task of reducing urban drug problems.

These fears are based largely on anecdote and impression. No systematic studies exist of how many people participate in the open marketing of drugs, where they come from, what they earn from participation, and how this selling fits into their careers. This study makes an effort to partially fill this gap by examining the role of street drug selling in the economic life of young males in Washington, D.C. It estimates the number of persons involved in the street distribution of drugs, describes their characteristics, and discusses what they earn from drug selling. It also presents data on how adolescents in high-risk areas view drug selling. Finally, it proposes some possible explanations for the observed patterns of participation and earnings and examines their policy consequences.

This study's data and conclusions are highly specific to the District of Columbia in the mid-1980s. In other communities with less violence and less stringent enforcement, the returns to drug selling may be less. This study's results may help focus attention on the policy importance of understanding the dynamics of drug-selling markets.

THE DRUG-SELLING POPULATION: NUMBERS AND CHARACTERISTICS

Numbers

The District of Columbia Pretrial Services Agency (PSA) provided data on all individuals charged with a criminal offense during the three-year period 1985-1987. In that time, 14,544 persons were charged with drug-selling offenses in the District. Another 9572 were charged with drug possession but not with sales offenses. Thus, out of

almost 50,000 persons charged with some criminal offense in that three-year period (some being charged more than once), approximately half were charged at least once with a drug offense.

Because our data were most relevant to the District (as opposed to the Washington metropolitan area), we focused our analysis on the 11,430 District residents charged with drug selling. Many persons with a non-District address were also charged with drug offenses in the District. Of those charged with drug selling, 21 percent were classified by us as nonresident; 41 percent of those charged with drug possession (but not selling) were similarly classified.

Characteristics

Age, Race, and Sex. Our target population of District residents charged with drug selling showed important differences from the rest of the criminally charged population: It was younger (40 percent of the offenders were between the ages of 18 and 24, compared to 28 percent for the nondrug offenders); had fewer whites (1 percent, compared to 10 percent); and had fewer females (11 percent, compared to 22 percent). Given that the vast majority of residents with drug-selling charges were young black males and given the large numbers of such charges, the rest of our PSA data analysis focused on black males aged 18-29.

Criminal Charge History. For the 1967 cohort (the youngest cohort fully covered by our data), 16 percent had been charged with a drug-distribution offense between the ages of 18 and 20; the fraction charged with some drug offense, including possession, was more than one in five. Nearly one-third of the cohort accumulated a criminal charge, drug or otherwise, within the first three years they were eligible for adult arrest. Within the 1957 cohort, 50 percent of those who had any criminal charge were charged at least once with drug distribution. The three-year rates were somewhat lower for older cohorts, but even for persons born in 1957 (aged 30 at the end of our observation period), more than 9 percent had a drug-distribution offense, and 29 percent had some criminal charge.

Education. Drug sellers were less likely to have completed high school than were persons of the same age charged with nondrug offenses. Moreover, the younger cohorts charged with drug selling had very low high school completion rates compared with either the older drug-selling cohorts or with same-aged black males in general.

Employment. Drug dealers are no more likely to be unemployed than are the rest of the charged population; approximately two-thirds reported being employed when they were arrested. The data suggest

that persons involved in drug selling are similar to those involved in more traditional criminal activity: At least for persons born before 1968, street selling of drugs does not seem to have attracted persons with good prospects in the legitimate work force. (However, the data do not provide a strong test of this hypothesis, precisely because early involvement in drug selling may lead youth—even talented youth—to drop out of school.)

Limitations of the Data

We cannot use these data to describe the whole population of drug sellers. Those who sell drugs in private settings, such as college dormitories, are subject to little risk of police apprehension. The complete population of District resident drug sellers may have substantial numbers of sociodemographic groups other than young black males. However, the data do permit an assessment of the minimal size of the drug-selling population and may provide an accurate description of those who sell in street markets (and are subject to high risk of arrest).

EARNINGS FROM DRUG SELLING

The Sample

For data on individual earnings from drug dealing at the street level, we interviewed 186 males on probation; most were not serving a sentence for drug distribution. We selected them from 524 persons we initially approached because all 186 reported, in a preliminary interview, that they had earned money from drug selling in the six months before they entered probation (the "target period").

We required those interviewed to be male, resident in the District, and aged 18–40. The sample's demographic characteristics were similar to those of drug sellers recorded by the PSA except that they showed a higher level of education. Many interviewees had had numerous arrests before their probation term; nearly two-thirds reported arrests for nondrug offenses. Their self-reports of criminal history were highly consistent with official records. The sample had a very low marriage rate—overall, 70 percent of the interviewees had never been married. Even for those aged 31–40, only 58 percent had ever been married and only half in that age group reported themselves to be heads of households. The vast majority (88 percent) lived in a private house or apartment; only 3 percent were in a halfway house or shelter or were homeless. Most were employed; the reported median hourly wage was \$7.

The sellers reported low levels of expenditure on household goods, such as rent and food; clothing expenditures were much higher. However, approximately half reported contributing to the financial support of someone else, generally someone outside their household. Half reported purchasing drugs for their own use; their median expenditure on drugs was some \$400 per month.

The interviews were conducted by RAND-hired field staff in the District of Columbia Adult Supervision Branch of the Social Services Division; probation officers were neither present at the interview nor given access to the interview material.

The Data

Drug Earnings. The interview data partially confirm popular perceptions of the profitability of drug selling. It is indeed much more profitable on an hourly basis than are legitimate jobs available to the same persons; those who sell regularly earn higher monthly incomes than they can from other activities. On the other hand, few of the street-level dealers who made up most of this sample reported the kinds of incomes from which Mercedes and great fortunes spring.

Though the median reported gross earnings were only some \$10,000 per year, this figure reflected the relatively few days many individuals actively sold. Only three in eight reported that they sold on a daily basis. One-fourth sold one day a week or less frequently. The mean number of hours sold on the last day of sales was four. We estimated the median hourly earnings at approximately \$30.

The reported earnings were very skewed, reflecting the great range of selling frequency. Table S.1 shows that those who sold frequently made relatively large incomes. Table S.1 reports two measures of earnings: Gross income is a measure of total revenue, without subtracting costs (such as drug purchases for resale), and overstates earnings; net income subtracts all costs the respondent could identify, including drugs purchased for resale. This second measure of income understates the return to drug selling because 40 percent of interviewees reported that they consumed some of the drugs they were given to sell; 10 percent reported that they consumed fully half the drugs they acquired this way. For most purposes, though, we believe that net earnings are the more appropriate measure of the return to drug distribution.

Of persons who sold on a daily basis, half reported gross revenue of more than \$3600 per month, and the average (mean), even after adjusting for possible overstatement by those reporting the highest earnings, was \$6800 per month. With the net income concept, the mean earnings of those selling daily was \$3600 each month, in addition to the

Table S.1

SELLING FREQUENCY AND EARNINGS

Frequency of Sales	Percent	Monthly Gross Income Median (\$)	Monthly Net Income Median (\$)
Daily (Mean)	37	3600 (6800)	2000 (3600)
Two or more days per week (Mean)	40	1330 (2510)	830 (1200)
One day per week or less (Mean)	23	300 (740)	50 (160)

drugs. Persons who sold very infrequently earned very little in net income.

“Complementary” Earnings. Only approximately one-fourth of the dealers reported being involved in property crime during the target period; very few (3 percent) reported violent crime during that same time. On the other hand, three-fourths had legitimate employment at some point during the target period; the median monthly income from the job was \$800.

For those who see drug selling as stemming from poverty and the poor labor market prospects of many young central city males, understanding the relationship between work and drug selling is critical. One interpretation of the relatively high employment rate of dealers is that drug dealing is an underground version of “moonlighting”—it provides a high-paying supplement to regular employment but cannot be converted into the primary job. Few dealers in our sample reported working long hours at drug selling; this may reflect the fact that buyers are active in street markets primarily during a few hours. Similarly, demand may be sharply peaked on weekends, providing slots for additional sellers on only one or two days each week. This would suggest that sellers cannot readily increase the number of hours they sell without experiencing a sharp decline in their hourly earnings from drug dealing. Another possible reason why many sellers devote so few hours to drug distribution despite the high earnings it offers is the differing attitudes toward risk in the seller population. Because the risks of selling increase with the time devoted to it, some sellers may choose fewer hours—and consequently lower risks—along with the lower income.

Thus, drug selling appears to be compatible with—and perhaps complementary to—holding a legitimate job. Moreover, those who sold more frequently were also more likely to earn more from their legal jobs.

ADOLESCENT INVOLVEMENT AND PERCEPTIONS OF DRUG DEALING

The above analysis deals with adult offenders. Much of the current public concern is with adolescents' involvement in drug selling. The Urban Institute conducted a survey in 1988 of ninth- and tenth-grade males in high-risk areas of the District; it asked questions about drug use, delinquency, and crime. To supplement the work of the current project, The Urban Institute added some questions on involvement in drug selling and perceptions of associated risks and rewards.

Of the 387 respondents (most of whom were aged 15½–17½), approximately one in six reported having sold drugs; of those, most had sold more than five times in the preceding 12 months. Selling was more likely than using drugs (16 percent had sold, 11 percent had used), and the two groups had little overlap: Only 19 percent of those who did either did both. This fact suggests that drug selling is viewed by many of these very young participants as essentially an economic opportunity rather than a means of financing one's own drug use. This situation contrasts with the heavy drug use of the adult probationer-sellers; however, the two data sets are consistent in that the probationer-sellers reported their first drug use as occurring at a relatively late age.

Drug selling was widely perceived by respondents as both profitable and risky. The basic data appear in Table S.2. Perceptions of returns from drug selling were reasonably accurate. A high percentage of adolescents believed that earnings of \$1000 per week were readily obtainable; in fact, such earnings are available to those who work steadily in the drug trades (though most participants, by working only occasionally, earn much less). Persons who had sold five or more times saw the risks as lower and the returns as higher than did those who were nonsellers or who sold only very rarely. Nonetheless, even among sellers, 38 percent reported that a person selling drugs for a year would very likely be caught by the police, and half thought that such a person was very likely to be injured seriously or killed. Thus, it is not for lack of awareness of risks that so many are going into this criminal business.

The percentage of persons reporting that they anticipated being involved in drug selling after completing their schooling was small (10

Table S.2
ADOLESCENTS' VIEWS OF DRUG SELLING
 (Percent)

Outcome	Frequent Dealers ^a (n = 35)	Other Sample Members ^b (n = 337)
	Percentage Seeing Outcome as Very Likely in a Year of Drug Dealing	
Arrest	38	49
Prison sentence	25	37
Severe injury or death	50	61
Seller friends earn > \$1000/wk.	59	19
Students selling at school earn > \$1000/wk.	40	35

NOTE: n = sample size.

^aFrequent dealers are those reporting five or more sales in the previous year.

^bPersons who sold infrequently or not at all.

percent) compared to the percentages of earlier cohorts estimated to have been so involved. Also encouraging was the very low regard in which respondents held drug dealers: More than 80 percent reported that they did not at all admire someone who sold drugs.

CONCLUSIONS

Drug Selling's Increasing Economic Importance

Drug selling is clearly an important career choice and major economic activity for many young black males living in poverty in the District of Columbia. In recent years, the percentages of young black males charged with drug selling before their 21st birthday have been alarming. Our PSA data analysis suggests that, over time, drug dealing has become increasingly important for young offenders.

A substantial percentage of those who do sell drugs earn much more than they can earn from legitimate activities. We estimated the total net earnings from street drug markets at approximately \$350 million in

1988. This figure compares with total earnings from property crime—for the entire Washington metropolitan area—of \$140 million to \$225 million, much of which came from shoplifting. It is useful to note that black males aged 18–40 in the District had estimated legal income of \$1.2 billion in 1988; we estimate that \$300 million in street drug earnings went to that same demographic group.

The Risk Factor

Understanding why drug selling yields such large incomes for persons with otherwise weak earning capacities is important. The answer may lie in the substantial risks drug sellers face. These risks include death from homicide; serious injury inflicted by other participants; and arrest, imprisonment, and seizure of assets. We examined the level of various risks and how much they might contribute to explaining drug dealers' high earnings.

We estimated that approximately 24,000 District residents were active street drug sellers in 1987. Taking into account the fact that many persons sell infrequently, we posited this number as being equivalent to some 14,000 "regular" drug sellers. We estimated that a regular drug seller—one who sold more than one day per week—might have faced annual risks of 1.4 percent of being killed, 7 percent of being seriously injured, and 22 percent of being imprisoned. Using data on what income individuals have required for compensation of risks of death or injury in other settings, and taking into account the length of prison sentences, we estimated that the risk compensation might account for some \$20,000 per year; this figure compares to \$27,000 (plus drugs withheld) in net earnings. Table S.3 contains the basic results.

Table S.3

ESTIMATED RISKS AND NECESSARY COMPENSATIONS
PER YEAR OF REGULAR DEALING

Hazard	Number	Risk (%)	Compensation (\$)
Death	200	1.4	10,500
Injury	1,000	7	2,100
Incarceration ^a	3,000	22	9,000

^aEstimated average time served is 18 months.

Our estimates of each kind of risk's contribution to dealers' earnings are very rough; they are highly sensitive to how the population of actual and potential street drug sellers values different kinds of risks. Young, poorly educated males may place a lower value on these risks than do others, reflecting both their weak economic alternatives and a growing acceptance of violence in everyday life.

Implications

With respect to enforcement, we note first that street drug selling in the District of Columbia in the late 1980s was a very hazardous business. Those who participated in such selling were at significant risk of physical harm and at even higher risk of imprisonment. Such risks failed to deter substantial numbers of young males from participating in the trade (at least on an occasional basis). This may reflect a lesser concern for physical risks and/or a greater discounting of the future; a characteristic of crime is that the reward is immediate and the punishment contingent and apparently distant. Adolescents in poor areas appear to overestimate the physical risks and underestimate the enforcement risks, but even the latter are viewed as substantial. The prospects for raising actual and perceived risks enough to make for markedly more deterrence through heavier enforcement against sellers do not appear promising.

Would improving the labor market prospects of the current adult dealers substantially reduce participation in drug selling? Three factors mitigate against accomplishing this. First, many dealers have acquired expensive drug habits: Half kept back some drugs from their consignments; half also spent additional money on drugs for personal consumption. On average, the sample members spent 28 percent of their drug income on purchasing drugs. Getting these people out of drug selling may require getting them off drugs. Second, raising their wage earnings by 50 percent (to a median hourly wage of \$10.50 and median monthly earnings of some \$1200)—a very ambitious target for a group with relatively modest educational attainment—still leaves them with a much smaller total income than what they can attain now by supplementing their legitimate earnings with drug selling. Third, in considering the prospects for reducing participation in drug selling, one must take into account the demand for drugs. Improved labor force opportunities may reduce young men's willingness to enter into the drug trades, given the current earnings from that activity. However, if demand is not very price sensitive, drug users may accept substantial price increases and thus raise the returns to drug selling enough to provide almost as many selling opportunities as are available currently.

Here a distinction must be made between adult and juvenile sellers. Young sellers do not appear yet to be drug dependent. For them, drug selling is more likely to be purely an economic decision, and we may view them as indeed having more choice about continuing in the business. Improved prospects in the legitimate labor market may do more to reduce the flow of youth into regular selling as adults than it does to get current adult sellers out of the drug market.

Clearly one important task before society is finding effective ways of communicating to younger upcoming cohorts that the short-term rewards from drug selling are deceptive. The careers of drug sellers are highly risky and subject to extensive and frequent interruption. Lifetime earnings may not be high relative to those available from steady employment in modest-wage legitimate employment. The long-term prospect is of frequent spells in prison and expensive drug dependencies. We must learn how to emphasize these risks in ways that deter young males from embarking on a drug-selling career.

Though the numbers from this study are specific to Washington in the late 1980s, the results point to the need for reducing the demand for drugs, particularly in street markets. This should be accomplished not only through traditional prevention and treatment, but also through experimentation with the effectiveness of user-oriented enforcement against the patrons of street drug markets.

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CONTENTS

PREFACE	iii
SUMMARY	v
ACKNOWLEDGMENTS	xv
FIGURES	xix
TABLES	xxi
Section	
I. INTRODUCTION	1
Background and Motivation	1
Major Findings	4
Other Preliminaries	6
II. THE MARKETING OF DRUGS	13
The Variety of Drug Markets	13
The Growth of Drug Markets	18
Analytic Framework	20
III. THE DRUG-DEALING POPULATION	28
The Size and Composition of the Charged Population ...	29
Drug Charges: Risks for Young Black Males	35
Education and Specialization of Drug Sellers	40
The Missing Sellers	45
Conclusions	46
IV. THE ECONOMIC LIFE OF STREET-LEVEL DRUG DEALERS	48
Major Findings	49
Data Collection	50
Sample Characteristics	52
Drug-Selling Activity	58
Legal and Illegal Sources of Income	62
Effects of Other Variables on Drug Income	67
Drug-Business and Personal Expenses	69
Personal Drug-Consumption Patterns	73
Conclusions	75

V.	ADOLESCENT ATTITUDES TOWARD DRUG DEALING	78
	DEALING	78
	Sample and Methods	78
	The Prevalence of Drug Selling and Drug Use	79
	Perceptions of Risks and Returns	80
	Conclusions	83
VI.	THE ECONOMICS OF DRUG SELLING	84
	Principal Findings	84
	Illegal Markets and Social Mobility	85
	Income from Crime	89
	Risks for Dealers	94
	Participation and Work	99
	Policy Implications	101
	Concluding Comments	109
	Appendix	
	A. THE PRETRIAL SERVICES AGENCY DATA	113
	B. FIELD METHODS	118
	C. REPRESENTATIVENESS, RELIABILITY, AND VALIDITY OF DEALER SURVEY DATA	142
	D. INCOME GENERATED BY PROPERTY CRIME	148
	REFERENCES	165

FIGURES

3.1.	Distribution of criminal charges, by year of birth, black resident males aged 18–29	34
3.2.	Black male residents charged, by year of birth	38
3.3.	Arrested offenders' high school completion rates, by charge type and year of birth	41
3.4.	Arrested offenders' high school completion rates, by age, 1985–1987	43
B.1.	The study's informed-consent form	125

TABLES

S.1.	Selling frequency and earnings	ix
S.2.	Adolescents' views of drug selling	xi
S.3.	Estimated risks and necessary compensations per year of regular dealing	xii
1.1.	Arrests for prostitution and gambling, 1985-1988	8
3.1.	Arrests for drug offenses, District of Columbia, 1981-1987	29
3.2.	Persons charged with criminal offenses, 1985-1987	30
3.3.	Incidence of drug-selling charges, by number of charges, 1985-1987	31
3.4.	Characteristics of all persons charged with drug and other offenses, 1985-1987	32
3.5.	Characteristics of residents charged with drug and other offenses	33
3.6.	Percentage of persons with drug charge, given some charge, by age, 1986 and 1987	35
3.7.	Number of black male district residents charged in 1985-1987, by year of birth and type of charge	36
3.8.	Percentage of black male residents charged in 1985-1987, by year of birth and type of charge	37
3.9.	Education and employment, by drug and nondrug charges, District black males aged 19-29	40
3.10.	Percentage of persons with multiple charges specializing in drugs, 1985-1987	44
4.1.	Household characteristics	53
4.2.	Education and employment history	55
4.3.	Self-reported arrest and conviction history	56
4.4.	Probationers reporting nondrug offenses during target period	58
4.5.	Drugs generating income for respondents, six-month period before probation	59
4.6.	Sales activity, by major drug	61
4.7.	Arrest and conviction for drug offenses, by frequency of drug selling	63
4.8.	Monthly legitimate income	64
4.9.	Monthly income	65
4.10.	Dealer characteristics associated with monthly drug income	68

4.11.	Dealer characteristics not associated with monthly drug income	69
4.12.	Monthly expenses	70
4.13.	Drug-business expenses, by selling frequency	71
4.14.	Association between income and expenses	72
4.15.	Illicit drug consumption	73
4.16.	Frequency of drug consumption	74
4.17.	Association between drugs sold and used	75
5.1.	Adolescents' views of drug selling's risks and returns	81
6.1.	Estimated risks and necessary compensations per year of regular dealing	104
A.1.	Black males in the District of Columbia, by five-year age groups, 1986	117
B.1.	Distribution of attempted interviews among sites	128
B.2.	Reasons for nonparticipation	129
B.3.	Nonresponse analysis: Comparison of drug arrests for interviewed and screened-out probation clients	130
B.4.	Site effects	134
B.5.	Overall interviewer assessment of respondent behavior	138
B.6.	Comparison of respondent answers to key items, by interviewer	139
C.1.	Comparison of PSA and dealer survey samples	143
D.1.	Comparison of victimizations reported to the police, Washington metropolitan area versus the United States, selected years	153
D.2.	Average value reported per property crime, Washington metropolitan area estimate and national, 1987	154
D.3.	High and low estimates of average income realized from different types of property crime	156
D.4.	High and low estimates of average income generated by property crimes (excluding shoplifting), Washington metropolitan area, 1987	157

I. INTRODUCTION

BACKGROUND AND MOTIVATION

As the drug problem has become more visible in recent years, the apparent explosion in young urban males' involvement in the drug-distribution business has received increasing attention. The public generally sees drug dealing as enormously lucrative, even at the lowest levels of the trade; the media regularly report earnings of hundreds of dollars a day for young, poorly educated sellers.¹ The trade's financial attractions are seen as a primary reason why the drug problem is proving so intractable; with such large earnings available, many young males will continue to sell, even at very high risk of imprisonment.

Drug dealing also relates to the growth of an "underclass"—a population group that seems unable to escape conditions of persistent poverty (Sawhill, 1989; Wilson, 1987). If drug selling is such an attractive activity for the indigent young, we may expect a continued worsening of some elements of the underclass problem. Although it may generate large transitory incomes, drug dealing is a risky activity and does not appear to provide (as have certain other illegal markets, such as bootlegging or numbers gambling) the basis for a legitimate entrepreneurial career. Persons who become involved with drug dealing at a young age may find themselves permanently shut out of steady employment at reasonable wages. This problem is likely to be particularly acute if the existence of drug-market opportunities weakens commitment to finishing high school. Given the low quality of legitimate jobs available to impoverished youth in many large cities, such an effect on high school completion rates is highly plausible, yet high school completion is critical to future labor force success. Further, involvement in drug dealing early in one's career increases the likelihood that one will acquire a serious criminal record and exacerbate one's handicaps in the legitimate job market.

The decline in labor force participation on the part of young black males, particularly those with little education, relates to this concern (Smith and Welch, 1989). For example, Kasarda (1988) reports that the percentage of central-city black males aged 16-24 who were neither in school nor in the labor force rose from 8.2 in 1969 to 14.1 in 1985; for the corresponding group of whites, the 1969 rate was 4.5 percent and the 1985 rate, only 6.1 percent. The unemployment rates for the

¹See, for example, *Time*, May 9, 1988, pp. 21-33.

same group of black males rose from 13.0 percent in 1969 to 37.1 percent in 1985; for white central-city males aged 16–24, the corresponding figures were 7.3 percent in 1969 and 13.5 percent in 1985. For central-city black males (over the age of 16) who did not complete high school, the unemployment rate rose over the same period from 6.6 percent to 27.3 percent; for whites, the corresponding rates were 4.3 percent in 1969 and 15.5 percent in 1985.²

Attempts to explain the rise in unemployment and lowered labor force participation reveal surprisingly little systematic exploration of the possible role of criminal opportunities. Much recent discussion of long-term poverty has focused on the incentive effects of social programs, such as food stamps and Aid to Families with Dependent Children (AFDC; for a review, see Sawhill, 1988). Some observers (for instance, Murray, 1984) claim that these programs have reduced poor persons' willingness to participate in the work force, given the low incomes generally available to them from legitimate employment. Others (for instance, Wilson, 1987) see the decline in black youths' labor force participation as resulting from a lack of appropriate jobs—a lack caused by the long-term decline in manufacturing in the United States, particularly in older cities. But researchers have made no effort to test whether the declines we described above might arise from black urban youths' diversion to criminal enterprises. Nor does any systematic study exist of the role criminal earnings play in the economic life of the poor; indeed, we could find only the most passing mention of the possibility that criminal earnings might be important. No estimates exist of either the aggregate or individual returns from participation in crime generally³ or drug dealing in particular, nor does any analysis of careers in drug markets exist. Note that the Panel Survey on Income

²The lower unemployment rate for the less-educated males as compared to the age group as a whole may reflect the large proportion not in the labor force; this latter group is not included in the denominator of the unemployment rate.

³One exception is a study by Viscusi (1986), based on self-reported data on criminal participation and earnings in a 1980 sample of black males, aged 16–24, living in the central cities of Boston, Chicago, and Philadelphia; this was a population at high risk of poverty. Though the study reached some interesting conclusions, the data suggested such high levels of underreporting as to raise doubts about the analysis' validity (Thompson and Cataldo, 1986). Nonetheless, even with substantial underreporting rates, illegal earnings accounted for one-fourth of total income for the young minority males in Viscusi's sample. This isolated study was carried out by Viscusi before the cocaine market's major expansion. It does not fit well into the larger literature on poverty. For example, Weinberg (1986), in laying out a research agenda on poverty for the next decade, makes no mention of criminal economic activity as a potential source of either opportunity or obstacle in an individual's escaping poverty.

Dynamics (Duncan and Morgan, 1983), the most basic data set for the study of poverty, does not include any data on criminal earnings.⁴

The involvement of the young and poorly educated in drug selling also adds to the social damage of drug use. It may increase sellers' drug consumption, because selling offers access to lower-priced drugs. With high transitory incomes and high probabilities of incarceration or serious injury (both of which reduce incentives for capital accumulation), sellers are likely to have expenditure patterns that emphasize short-term conspicuous items rather than accumulation of real or financial assets. Finally, these incomes generate violence, which is exacerbated by the sellers' very youth—a market full of 18-year-olds is likely to see more violence in dispute settlement than is one dominated by more strategically oriented 30-year-olds.

All these concerns rest on beliefs about the high returns available to young persons from street dealing and about the numbers and characteristics of persons involved in drug distribution. Yet the evidence on earnings levels is almost entirely anecdotal, and some of that evidence is decidedly contrary. For example, a recent *New York Times* article⁵ asserted that crack dealing had become the sweatshop for urban minorities in the late 1980s, with lower-level employees barely earning minimum wage from their involvement and spending much of what they did earn on their own drug needs. This statement strongly contradicts much of the *Times*' earlier reporting.⁶ Whether this contrast represents a deterioration of the market (from the sellers' point of view) or simply the vagaries of reporters' sampling is not determinable.

In addition, no one has estimated either the total number of drug dealers in a community or the share of particular population groups involved in drug distribution. Young minority males may dominate the visible population of crack dealers, but this fact does not show either that crack dealing is an occupation of a substantial fraction of this same population group or that drug dealing (perhaps in less conspicuous settings and involving other drugs) does not heavily involve other groups.

Unfortunately, no compelling method for counting the number of drug distributors exists. Population surveys that rely on self-reports of drug selling are likely to yield undercounts, both because of selective

⁴Including such questions in the survey might lower the overall response rate.

⁵"Despite Its Promises of Riches, the Crack Track Seldom Pays," November 26, 1989, p. A1.

⁶See, for example, "Crack at Retail: Experiences of Three Former Dealers," August 2, 1988, p. B1.

nonresponse and the question's sensitivity.⁷ To investigate earnings and careers—in particular, the attractions the drug trade offers to various population groups—the ideal method would be to sample the population of low-level dealers⁸ and obtain information about their socioeconomic status, careers in legitimate and criminal activities, and earnings in those same activities; to examine their dealing careers, we would have to reinterview the dealers in later years.⁹ However, developing a sampling frame for low-level dealers is exceptionally difficult. Many dealers operate unobtrusively; the seller who restricts himself to middle-class clients in private settings (home or office) is only identifiable through laborious and expensive sampling of the user population.¹⁰ Moreover, dealers who operate in conspicuous settings (that is, in open street markets) have every reason to be suspicious of interviewers. Systematic interviewing exposes interviewers to considerable danger.¹¹

MAJOR FINDINGS

This study reports data and analyses primarily on dealers who have been caught by the police in the District of Columbia. Thus, this is not a random sample of the dealing population, and we make no inferences about the dealer population in general. We cannot, for example, describe the age/race/sex composition of dealers through such a sample, nor can we estimate the total number of dealers. However, we can use such data to make minimal estimates of how many individuals from particular population groups are involved in drug selling; these estimates produce some important insights into the role of drug selling

⁷An alternative is to count the number of persons who are drug purchasers and couple this with estimates of the average number of purchasers each seller services; the former would again require a population survey (but with a less sensitive question), while the latter would require interviews with a sample of known drug dealers. Though possible, this approach again is subject to important sources of potential bias, particularly in the sampling of drug dealers.

⁸In terms of the number of participants, drug dealing is dominated by the retail end. At the higher end, the business is almost entirely brokerage, with very low levels of labor input per gram of drugs (see Reuter and Haaga, 1989).

⁹Given the rapidity of changes in drug markets, to infer the future careers of young dealers by examining data on older dealers would be dangerous.

¹⁰During the past decade several ethnographers have carried out such research (see, for example, Murphy, Reinerman, and Waldorf [forthcoming]). These studies have reported data for very small numbers of dealers.

¹¹Fagan and Chin (1989a, 1989b) analyze data from such interviews, carried out by a specialized "street studies unit" in New York. The head of that unit reported that the interviewers, recruited from among former drug users, needed to exercise great care and discretion in carrying out these interviews (personal communication); even then, they were occasionally injured in the course of their work.

in groups of particular interest. They enable us to confirm, at least for the District of Columbia, the importance of drug selling for young poorly educated black males. We can also describe the population involved in selling in exposed settings (which we will refer to as "street" or "open" markets, though these settings also include crack houses in which the customer approaches the dealer from the street, even if the seller is indoors).

The study's major findings come from two analyses, which we present in Secs. III and IV. Data on arrestees from the Pretrial Services Agency (PSA) show that the population of District resident adults charged with drug distribution during the period 1985-1987 was very young (69 percent were aged less than 30), predominantly male (88 percent), and black (99 percent). A substantial fraction of the District's young black males, particularly those who did not finish high school, participated in drug selling during 1985-1987. For the cohort of black males born in 1967 and resident in the District, we estimate that approximately one in six was charged with a drug-selling offense between the ages of 18 and 20. Given that not all participants are charged, the true participation rate may be much higher.

Indeed, a sample of probationers who reported in confidential interviews that they sold drugs in the six months before entering probation showed that only half had *ever* been charged with that offense. These probationer interviews provided the second set of major findings, which covered earnings from drug selling. Drug-selling income dominated the probationers' total earnings, though more than two-thirds of the sample reported current legitimate employment; drug dealing yielded more than twice as much income as the legitimate jobs. Many probationers dealt drugs only on a very occasional basis; one-fourth reported selling only one day a week or less, receiving correspondingly modest earnings. For the three-eighths of the sample members who reported selling on a daily basis, median gross earnings were \$3600 per month; median net earnings, to which we must add substantial in-kind income (that is, drugs withheld for personal use), were \$2000.

Like most numbers, these figures tell little in themselves. On the one hand, they are vastly less than the figures the popular press frequently reports. Nor are they the earnings from which Mercedes are purchased. On the other hand, they represent an income level far beyond the attainment of this same population in legitimate employment. The dealers were generally heavy users of drugs themselves, and even after allowing for personal drug consumption provided by withholdings from the consignments they received for sale, dealers spent an average of one-fourth their earnings on drug purchases.

These data all pertain to adults, yet much current concern focuses on adolescent involvement in the drug trades. To examine adolescents' behavior, in Sec. V we report data from an Urban Institute survey of ninth and tenth graders in high-risk public schools in the District of Columbia. These students were asked about their involvement in drug use, drug selling, and other delinquency. Approximately one in six reported having sold drugs, and few of the sellers were users (in contrast to the sample of adult sellers). The students regarded drug selling as a low-status occupation, and only 10 percent thought they would be involved in it after they finished their schooling; most current dealers did not believe they would continue in the business. Both sellers and nonsellers saw drug selling as a very lucrative business, but also as one having very high risk of injury and a moderate risk of imprisonment; sellers saw the business as more lucrative and less risky.

These data and findings raise several issues. Most significant, they appear to suggest that improving legitimate workplace opportunities available to urban minority males with a high school education or less may not reduce the number of them who turn to drug selling. We discuss this issue in Sec. VI.

Though financial returns from drug selling are high relative to current wages, drug selling also involves very high risk of imprisonment and death or serious injury. Therefore, the prospect of more stable and attractive job opportunities at wages only somewhat higher than those currently available might motivate future cohorts of poorly educated males to forgo the high earnings and associated risks of drug selling. This possibility, however, depends on how these physical, financial, and legal risks are viewed by this same population. If the demand for drugs is quite inelastic (that is, declines little in response to price increases), increasing the "opportunity cost" of drug-selling labor might have little effect on the quantity sold and result in increased total earnings from drug selling. In Sec. VI, we discuss this issue and attempt to identify both the policy and research implications of the study.

OTHER PRELIMINARIES

Omitted Topics

We omitted several topics related to our general aims because we could not obtain appropriate data. We briefly discuss the omitted topics below.

Juvenile Drug Dealing. This study's most conspicuous omission is analysis of juveniles' role in drug selling (beyond the self-reports of a small sample of ninth and tenth graders, which we discuss in Sec. V). That male adolescents are heavily involved in such activity is indicated by the astounding growth in recent years in the number of juvenile arrests involving drug sales; whereas in 1981 only 343 arrests for drug offenses occurred, that number rose to 1550 by 1987. In the first 11 months of Operation Clean Sweep (the Metropolitan Police Department's [MPD's] intensified street enforcement program initiated in late 1986), almost 1400 juveniles (out of a total of 12,700 drug arrests) were arrested for drug offenses; of these, 38 percent were aged 15 or younger.¹²

Juvenile criminal histories are much more tightly protected from researchers than are those for adults. We did not obtain data on how many different juveniles were arrested for drug-selling offenses, nor did we obtain interviews with juvenile drug sellers (except for those in the Urban Institute survey of District ninth and tenth graders, which we report in Sec. V).

If drug markets had not expanded substantially in recent years, this omission would not be a problem; we could learn about adolescent recruitment into the drug trades by interviewing young adults represented in our sample of probationers. Unfortunately, the growth of crack markets has been so rapid that to assume that the juvenile experiences of young adults now provide a good representation of younger cohorts still in their adolescence would not be reasonable.

White-Collar Crime. The data available on crimes are much weaker for so-called white-collar crimes, such as embezzling and commercial fraud, than for street crimes, such as robbery (Bidemann and Reiss, 1980). Victims are often unaware of the crime and have incentives not to report the occurrence. When we estimate income from income-generating crime and describe characteristics of the population involved in these activities, we do not include white-collar crimes. Beyond saying that the population involved in the various types of crime is likely to be very different, we can offer little on the subject.

Other Illegal Markets. At least two other illegal markets are potentially important sources of income for poor people: gambling and prostitution. We collected no original data on prostitution and little on gambling. Because our survey, which we discuss in Sec. IV, covered only males (who dominate the population of accused drug sellers), we

¹²"District Drug Sweep Snares Children into Dealing," *Washington Post*, August 13, 1987, p. A1.

could gain no information on prostitution.¹³ Several people we surveyed reported some involvement in the operation of illegal gambling enterprises, but the incomes they reported were very minor.

The only official data concern the number of arrests for these crimes. Table 1.1 contains the figures for the period 1985–1988. These figures, however, are ambiguous. The number of police arrests for prostitution is highly discretionary; arrests are easy to make, and how many are made in any given year is simply a matter of policy. The same holds true for gambling, though less strongly. These figures only permit us to say that the police appear to be giving less emphasis to these activities. Both markets may generate large incomes. That our Sec. IV sample of drug dealers reported little income from these activities may only imply a high degree of specialization.

Career Length. A critical issue is the length of drug-selling careers. If drug selling is a relatively brief phase through which numerous individuals pass, then policy can focus on delaying initiation or hastening desistance. If, however, it is a career lasting many years, then the policy focus may have to be quite different.¹⁴

The data available to us do not permit any assessment of career length. Though we have criminal histories of persons charged with drug distribution (Sec. III) and probationers who report earnings from drug distribution (Sec. IV), the rapid expansion of drug markets makes risky analyzing the careers of older sellers as a method of inferring anything about the future careers of younger dealers.

Table 1.1

ARRESTS FOR PROSTITUTION AND GAMBLING,
1985–1988

Activity	1985	1986	1987	1988
Prostitution	1551	1454	1390	1225
Gambling	722	546	356	102

SOURCE: Metropolitan Police Department, Washington, D.C.

¹³We obtained data on the prevalence of pimping in the sample. We did not include male "hustling" (that is, transvestite and homosexual prostitution) in the list of questions addressed to the male sample.

¹⁴Career length is, of course, likely to vary in the population of dealers. We refer here to the central tendency.

Generalizability

No single city can represent U.S. cities as a group. The District of Columbia is atypical in several dimensions. Among the nation's 20 largest cities, it has a smaller share of the metropolitan-area population within its boundaries (23 percent, compared with 31 percent for Boston, the next-lowest share). This fact suggests that a higher share of the metropolitan poverty population (the group at highest risk of involvement in street drug selling) is concentrated in the city, given that poverty is higher in central cities. However, the percentage of the District's population living in poverty in 1979 was lower than that in other cities (Maxwell, 1985, p. 7).¹⁵

We might also expect the stringency of enforcement in a city to affect earnings from drug dealing; by some measures, the District is exceptionally stringent. The ratio of drug arrests to population is higher in Washington than in other major cities¹⁶ and, notwithstanding concerns about overload on the criminal justice system, the city has had a very high rate of felony drug convictions per capita.¹⁷ The District also appears to have an exceptionally high rate of imprisonment for drug felony convictions. In 1987, 2437 persons were sent to Lorton (the city's prison) on drug charges, compared to a total of 4622 persons convicted on drug felony charges—an imprisonment ratio of 53 percent.¹⁸ National data for 1986 indicate that of persons convicted of

¹⁵More recent data are available for the District of Columbia from a 1986 Greater Washington Research Center survey (Grier and Grier, 1988). These data show an increase of 8 percent in the number of persons living in poverty in the District, despite a decrease of 2 percent in the District's population. Comparable post-1980 data are unavailable for other cities.

¹⁶The Office of Criminal Justice Plans and Analysis has made comparisons for 1985 with eight other cities of comparable size and demographic composition. The District of Columbia had the highest arrest rate, with 14.8 arrests per thousand residents; most of the comparison cities had rates of less than 8 per thousand (District of Columbia Office of Criminal Justice Plans and Analysis, 1987). Note also that Washington has a very high ratio of distribution to possession arrests compared to the national level. In 1988, 40 percent of the city's drug arrests fell into this category, compared to 27.4 percent nationally.

¹⁷Data concerning the number of drug felony convictions in 1986 are available from prosecutors in eight jurisdictions (Bureau of Justice Statistics, 1989a). With a population of 627,000, the District reported 3410 convictions on drug-trafficking charges in 1986 (5.0 per thousand residents). Manhattan, with a population of approximately 1.8 million, had 3085 drug felony convictions (1.7 per thousand), and Los Angeles, with a population of some 8 million, had 6328 such convictions (0.8 per thousand). For the other four jurisdictions (New Orleans, San Diego, Indianapolis, and Rhode Island), the rates were substantially lower.

¹⁸The ratio is only approximate. Some persons convicted in 1987 may not be sentenced till 1988. Some persons imprisoned in 1987 were convicted in 1986.

drug trafficking, 37 percent received prison sentences and another 27 percent received a jail sentence (Bureau of Justice Statistics, 1989b).¹⁹

We might expect these factors to produce higher drug retail prices in the District of Columbia as compared to other cities since the risks of arrest and imprisonment appear to be greater.²⁰ In principle, this proposition is testable, but unfortunately the quality of price data across cities does not permit any testing.²¹

The effects of more stringent enforcement on individual and aggregate income from drug selling are ambiguous. If the risk of imprisonment an individual faces is a function of the time spent in selling, then we would also expect to find higher hourly earnings associated with higher penalties. However, high risk may lower the number of hours each dealer is willing to sell, thus reducing both individual annual earnings and the income of sellers as a group. The aggregate effect also depends on whether the market's efficiency is diminished by a reduction in the density of dealers, thus raising the search time for customers. This factor would lower the demand curve facing the individual dealer.

Nor can we determine the effect of higher enforcement on the number of persons who at some stage are dealers. On the one hand, incarceration will allow more persons to cycle through the business in a given time period; the imprisonment of one seller may create an opportunity for another.²² On the other hand, the higher risk may reduce the number of persons willing to enter the business at all.

¹⁹Note that Lorton is not the only prison in which District defendants may serve sentences of more than 12 months. The U.S. Bureau of Prisons also accepts some of the city's prisoners; data on the number sentenced there for drug charges in any specific time period are unavailable. Data for February 1987 showed that 650 were then in federal prison for drug offenses (U.S. Bureau of Prisons, personal communication, 1987). Thus, the percentage of persons convicted in the District who received prison sentences may be substantially higher than 53.

²⁰Mark Kleiman (personal communication) raises the issue of the denominator to be used for measures of risk. That the District has high arrest, conviction, and imprisonment rates does not demonstrate higher risks per sales transaction; if a higher percentage of the city's residents participate in the trades, then even risks per person may not be higher. The affluence of the Washington-area suburbs, as well as the small portion of the metropolitan-area population living in the central city, may explain such a higher prevalence.

²¹The published price data consist of ranges so great (probably representing a range of quality and accessibility) as to make comparisons across cities meaningless (see Reuter, 1984). For example, the Drug Enforcement Administration (DEA) reported that in the fourth quarter of 1988, the retail price of cocaine in Miami was \$55-\$85; in Los Angeles, \$50-\$100. It gave no purity data for either city. For one attempt at using such data, see Godshaw, Pancoast, and Koppel (1987).

²²This is not a statement that imprisonment has no effect. The higher risk of incarceration may lead the new sellers to set a higher price and thus lower sales volume. But if one is observing the number of individuals who appear as sellers in a given time period, the recycling effect may swamp the impact of the price increase.

Similarly, the estimates may reflect a snapshot in time as drug markets undergo considerable change. Retail prices for cocaine have fallen sharply since 1980 (National Narcotics Intelligence Consumers Committee, 1989); we hypothesize that this represents the results of an increasing supply of skilled and willing labor.²³ If drug selling competes with alternative legitimate employment, we must also recognize (as noted earlier) that the labor market prospects for urban black males without a high school education have been declining. To assume that the current prices—and the associated incomes—are good predictors of the long-run future or are representative of past earnings would be naive.

Finally, Washington has unusual drug-consumption patterns. First, phencyclidine (PCP) has been a much more important drug in the District than in any other U.S. city. One indication is that more than one-third of all persons arrested in the District in 1988 tested positive for PCP, whereas in most other cities, the figure was less than 5 percent (National Institute of Justice, 1989). For at least a decade, PCP seems to have been in wide use in the area.²⁴ Second, several indicators suggest that Washington's suburban drug problems are much more severe than those of other suburban areas. Third, the District ranks among the leading cities with respect to heroin problems.

To take all these factors into account and use the data herein to estimate earnings and participation rates in other cities and at other times is impossible. The estimates are specific to a time and place. Their research value is as part of an ongoing process of research into the dynamics of poverty and social policy. They should also help policymakers attempting to increase the employment of young, poorly educated males (see, for example, Greater Washington Research Center, 1989) understand the role of drug selling in the career decisions of their clients.

²³Costs of growing, refining, and transporting drugs are very low, constituting a small share of the costs of getting drugs to final users (as shown by the low ratio of the landed or import price to final price in the United States). For example, DEA price data for the fourth quarter of 1988 show the landed price of cocaine in Miami at less than \$20,000 per pure kilogram, compared to a street price of some \$135,000 for the same quantity, when broken down into diluted "street grams." The vast bulk of the cost of drugs to consumers is compensation to domestic distributors for the time and risks involved in the activity.

²⁴Indicative of drug markets' instability, the prevalence of PCP in the arrested population has declined dramatically throughout 1989. In November, the rate was down to 9 percent, compared to more than 40 percent 2½ years earlier.

Outline

In the next section, we present the study's analytic framework, focusing on what determines earnings from drug dealings and briefly summarizing relevant prior literature. The following three sections contain analyses of three distinct data sets.

In Sec. III, we analyze data from the Pretrial Services Agency to estimate the number—and describe the characteristics—of the population charged with drug selling in the District of Columbia. Given the dominance of young black males in that population, we estimate the probability of a District resident black male being charged with a drug-distribution offense in early adult years—one indication of drug selling's economic significance for that group.

In Sec. IV, we describe and analyze self-report data from a sample of 186 persons involved in the lower levels of drug distribution in the District of Columbia. We provide estimates of their earnings from drug selling, other crime, and legitimate employment, as well as estimates of their contribution to household expenses.

The latter two sections deal with adults involved in the drug trades. In Sec. V, we report on an Urban Institute survey of ninth and tenth graders in Washington schools in high-risk neighborhoods, describing perceptions of risks and rewards of drug dealing.

In the final section, we integrate the various analyses. We provide estimates of dealers' aggregate earnings from the open-market drug trades and analyze the risks associated with dealing that may account for the dealers' relatively high earnings. We also suggest what lessons policymakers might derive from these analyses.

Appendix A contains the data sources and definitions we used in the Sec. III analysis. In App. B, we describe the methods we used to collect data on dealer income and careers. In App. C, we present some findings on how representative, reliable, and valid the dealer interview data were. Appendix D is an analysis of national and local data on the numbers of property crimes and average earnings from them; this analysis produces estimates of total earnings from property crime in the Washington metropolitan area, a benchmark for the other analyses.

II. THE MARKETING OF DRUGS

This section contains some background for the study. We begin with a brief description of the growth of drug markets and the varied nature of their clientele and economics. A statement of the analytic framework underlying the study, basically a theory of drug-market dynamics, follows.

THE VARIETY OF DRUG MARKETS

Illicit drugs have been widely used in the United States since at least the late 1960s (Polich et al., 1984, ch. 2). In the period from 1965 to 1980, the two drugs generating the most concern were heroin and marijuana. Heroin was used regularly by a relatively small number (perhaps 1 million) of persons, predominantly minority males resident in a small number of large cities (Kaplan, 1983). Marijuana was used by many more persons (approximately 20 million in the mid-1970s) from a wide range of socioeconomic and ethnic backgrounds. Cocaine seems to have come into wide use only since 1980 or so. Other synthetic drugs, such as lysergic acid diethylamide (LSD) and PCP, have been in wide use in only a few cities.

Drug markets vary a great deal in a number of ways relevant to our study: the sources of demand, in terms of users' sociodemographic and economic characteristics; users' frequency of purchases; and the organization of the business. We consider the three most prominent drugs: heroin, marijuana, and cocaine. Neither heroin nor marijuana seems to have provided a large source of cash income for many poor¹ persons; this is in sharp contrast with cocaine.

Heroin

Heroin is sold mostly by users,² for whom the sale is less important as a method of generating cash than as a source of the drug for personal use. The typical retailer is a user who might obtain five bags of heroin for \$80 (each containing 10 milligrams of pure heroin plus 90 milligrams of diluents) and sell four at \$20 each, retaining the other

¹We refer here to persons who, except for their drug-selling earnings, would be at high risk of poverty because of their lack of labor force skills.

²For an account of the structure of heroin distribution, see Moore (1977). A detailed analysis of heroin users' economic situation appears in Johnson et al. (1985).

one for his own use. Though notional estimates of the revenue generated by heroin selling are quite large—perhaps \$10 billion³—actual net earnings appear to be a great deal smaller. Most of the earnings go to persons at the lower end of the distribution system, and much of their return is in the form of heroin itself.

Nonaddicts would seek to sell all the heroin to obtain the same total (money and drugs) return users obtained. Because each sale involves some risk, addict retailers (who retain some of the drug) will incur less risk for that same total return and may thus drive out nonaddicts, even if nonaddicts wanted to sell heroin.⁴

That most of the earnings (including both drugs and money) goes to the lower end of the trade is inferable from data showing that the price of heroin rises substantially from the ounce level to the final sale. An ounce price of only one-fourth the retail price⁵ implies that approximately three-fourths of heroin-dealing income goes to persons selling in units of less than an ounce.⁶ Great fortunes are undoubtedly made by major heroin dealers, but these great fortunes account for only a modest share of all the revenue generated by heroin dealing.⁷

The explanation for this division of income between the market's different levels may lie in the distribution of risks per gram. Law-enforcement risks per transaction are likely to be higher at or near the retail level because they involve buyers who have ongoing contact with the police and because they often occur in fairly public settings. Risks for a dealer are also determined primarily by the number of transactions rather than the quantity of drugs sold per transaction. Thus, the

³This figure is based on an estimated total consumption of 5 metric tonnes, at a retail price of \$2000 per pure gram; both figures are close to the official estimates in the mid-1980s (National Narcotics Intelligence Consumers Committee, various years).

⁴One can argue that users are likely to be less cautious in their selling because the drug itself reduces their prudence. To that extent, users are disadvantaged as sellers. Certainly it is frequently claimed that users can never attain the higher reaches of the trade for just this reason. However, regular use of heroin is associated with particularly high levels of property crime (Chaiken and Chaiken, 1982), suggesting that the need to obtain the drug makes users particularly aggressive offenders, perhaps also in their heroin-selling role.

⁵Fourth-quarter 1988 DEA figures showed an ounce price of some \$2200 for 20 percent-pure heroin. This gives a pure-gram price of approximately \$400. The price for a street gram in the same quarter was \$90-\$200. Retail purity has been approximately 10 percent for some years; this would yield a pure-gram retail price of \$900-\$2000.

⁶The heroin industry is generally not vertically integrated, so retailers and low-level wholesalers retain the difference between purchase and selling price; they also incur all the risks associated with their transactions.

⁷This statement about the share of total income going to low-end participants is surprisingly general. For example, the retailer of numbers betting in New York in the 1970s received some 70 percent of all the income generated by that activity (Reuter, 1983, ch. 3).

lower-level participants (selling smaller quantities) incur more risks per unit weight.

Dealers at the low end make very small amounts of money indeed. Johnson et al. (1985) report average earnings of only \$2200 per year from heroin dealing by New York Hispanic heroin users.⁸ Similarly, Anglin and Speckart (1986), reporting early 1970s data from a sample of heroin users who had been in California treatment programs in the early 1960s, found that daily users engaged in selling earned an average of only \$2500 per year from heroin dealing during the periods when they were actively using.

Ultimately, heroin consumption must be fueled by something other than heroin selling, a point sometimes obscured in the literature (for example, Johnson et al., 1985). It is, in fact, financed primarily by earnings from property crimes, social programs, and family income transfers. Under certain assumptions, heroin selling could indeed be the primary source through which addicted users finance their own consumption; this point is important enough for our analysis of the cocaine market to develop in detail.

Assume for simplicity's sake that two classes of heroin users exist: addicts, who have no legitimate sources of income; and occasional users, who have legitimate sources of income. Addicts sell to occasional users, enabling them to finance their own use. This, of course, requires that total consumption (expenditure) by occasional users be large enough to provide for the demands of addicts. Given what we know about the distribution of the demand for heroin by intensity of use, however, occasional users are unlikely to account for enough of total consumption to provide most of the income for purchases by addicts. That is, occasional users' payments to addict sellers, which represent payment for incurring the substantial risks of retailing heroin, are unlikely to be sufficient to enable addicts to compensate producers, importers, and wholesalers for their risks and other costs of getting heroin to the retail level.⁹

Indeed, occasional users with steady employment are unlikely to account for a significant share of total heroin consumption.¹⁰ The

⁸In addition, the authors estimated that these heroin users "avoided" expenditures on drugs—expenditures that would have amounted to another \$2000 or so per year.

⁹This ignores heroin sellers' other consumption needs. However, the available studies point to very low expenditures by heroin addicts on food, shelter, and clothing.

¹⁰This fairly important assertion rests on rather thin negative evidence and a long chain of inference. If occasional heroin users are to account for a significant share of the total heroin consumed, then they must be relatively numerous compared to the population of addicts, because the latter by definition consume more per head. They are also unlikely to have good connections (that is, reliable sources they can contact without risk) simply because they are occasional users. Hence, such users would likely have to go into

finances of the heroin trade depend heavily on crime other than heroin selling—notably, on property crime and the sale of other drugs. Given that property crime, as App. D shows, generates such modest total income, it cannot sustain a large heroin market income. Therefore, even at its peak, the heroin market probably did not represent an important economic opportunity for many young males at high risk of poverty.

Marijuana

Marijuana represents quite the opposite kind of market from heroin. Not only is use of the drug widely distributed in the population (Kleiman, 1989), but marijuana appears to be marketed by individuals from a broad range of backgrounds and in a wide variety of settings. Poor persons, for example, sell in street markets for marijuana. Indeed, in the District of Columbia, of the 91 street locations listed by the MPD in September 1988, 10 were sites for marijuana sales; of these, 2 were sites for no other drug (unpublished MPD data). At the same time, numerous sellers of marijuana appear to operate in much more protected settings, such as college dormitories. The sellers in these settings are likely to have educational and family income backgrounds similar to those of their customers. No basis exists for systematically estimating the division of total sales incomes between the street markets and the private markets.

Unlike heroin users, marijuana users typically purchase much more than a day's supply at a single purchase;¹¹ thus, the per-dose risks faced by sellers are lower. This fact, together with the lower penalties faced by marijuana sellers,¹² is enough to account for the smaller share of total income from marijuana dealing that goes to the retailer or low-level wholesaler. Markups from import, or from domestic farm gate, are also much lower (perhaps only four times) than for heroin or cocaine (ten times). Average incomes for retailers are likely to be quite modest, again reflecting the low risks and high accessibility.

street markets and incur a high probability of arrest. In fact, the police arrest few heroin users who appear nonpoor; persons arrested who test positive for heroin are older and more heavily involved in property crime than are persons among the arrested population who test positive for other drugs.

¹¹A typical purchase used to be one ounce—enough for 50 joints, or approximately one month's supply for a daily user. With the drug's rising price and potency, a quarter ounce may now be the more common unit. However, the potency increase is sufficiently large that this may still be almost a month's supply (see Kleiman [1989]).

¹²Reuter and Kleiman (1986) estimate that in the early 1980s, expected prison time per year of selling was much lower for marijuana (4 days) than for cocaine (33 days) or heroin (131 days).

Cocaine

For several reasons, cocaine appears to offer much greater economic opportunity for poor persons than do marijuana and heroin. The aggregate market for cocaine differs from that for heroin in that the income generated by property crime and transfer programs does not appear to be the dominant source of finance for consumption. A substantial middle-class demand for the drug exists; the income for purchases of drugs by middle-class users comes largely from conventional legal sources of income. Significant recruitment of new users into the cocaine market still occurs, whereas heroin recruitment seems to have dried up (as of the mid-1970s).¹³ But cocaine, in contrast to marijuana, is a drug that creates dependency, at least for some users; persons who use regularly may use relatively large quantities.¹⁴

We can probably best think of the cocaine market as a series of sub-markets, distinguished by the age, experience, and/or income of the users. Wealthy, experienced users may purchase relatively large quantities (ounces rather than grams) of the drug in discreet transactions that take place in the privacy of homes or offices. Such transactions are relatively infrequent, precisely because these users can purchase large amounts at a given time and are subject to little risk that the police will investigate their personal inventory.¹⁵

At the other extreme are young, new, relatively poor users.¹⁶ They may be forced to purchase small amounts in transactions that are highly exposed to police surveillance (what we will generally refer to as street transactions). Their lack of experience means that they will have trouble finding a seller in the context of their normal lives.¹⁷ Other groups of sellers lie between these two extremes.

¹³Official, nonsystematic estimates of the total number of users have shown no increase during the 1980s. The population seems to be aging; for example, the percentage of emergency-room admissions (involving heroin) of persons over age 30 has risen from 25 in 1976 to 70 in 1988.

¹⁴Reporting on a panel of early cocaine users, Siegel (1982) found that by the early 1980s some were using as much as 2 grams per day during peak usage periods; this level of intake was associated with a shift to smokable cocaine.

¹⁵They may also place higher value on the risk associated with each transaction and thus prefer to economize on the number of times they purchase. On the other hand, Kleiman (personal communication) suggests that even wealthy users may limit personal inventory levels in order to minimize their self-control problems.

¹⁶This category includes users who may be temporarily poor simply because they are young (such as college students).

¹⁷Note that most drug use begins when the individual shares the drug with a slightly more experienced user. At some stage the new recruit shifts to seeking the drug actively for him- or herself, though the user may still be in the experimental stage. This statement represents a distillation of anecdotes because we have uncovered no systematic account of drug-using careers with respect to mode of acquisition.

None of this information enables us to determine the potential earnings of young, poor cocaine dealers. Total sales revenue may be much higher than for heroin because of the large market of nonpoor users, but what share of this market is serviced by the poor is unclear. If the poor are selling primarily to each other, and if sellers (like their heroin counterparts) take most of their income in kind, then total and average earnings may not be large. Given the absence of data on where users of different types purchase their cocaine, direct observation of seller incomes is necessary if we are to learn just how financially attractive cocaine selling may be for the poor.

THE GROWTH OF DRUG MARKETS

In this study we emphasize drug dealing among income-generating crimes because of the apparently extraordinary recent growth in the scale of street drug markets, both nationally and locally. At the national level, estimates of total earnings of \$100 billion have circulated for years, though such estimates are of dubious origin (Reuter, 1984). Official estimates of total consumption rose rapidly through the mid-1980s (National Narcotics Intelligence Consumers Committee, various years); these estimates also lacked any clear empirical basis and are no longer published. However, rising numbers of deaths related to drug use and the growing visibility of drug distribution in many large cities have suggested that total consumption has expanded. For example, the Drug Abuse Warning Network (DAWN) cities in 1988 reported 1,976 deaths in which cocaine was a contributing factor, compared to 359 deaths in 1983.¹⁸ Prices have fallen,¹⁹ but it is generally assumed (without explicit justification) that total expenditures have continued to rise.

At the local level, indicators of growing drug consumption also exist. The MPD has, from time to time, reported on the number of locations at which drugs are openly for sale. In 1976, the public was alarmed that as many as 7 such locations existed in the District of Columbia. By 1987, the number was 83, and in September 1988, despite an intense and well-executed crackdown on drug dealing (Reuter et al.,

¹⁸Data are adjusted to simulate a consistent panel for the period 1976-1988. Actual annual numbers reported are not valid for comparison because they do not represent consistent panels of medical examiners.

¹⁹Again, note that the published price data (DEA, various years) give extremely broad ranges, making comparison of prices difficult. However, in Chicago (for example), the reported midrange value has fallen from \$100 in 1985 to \$85 in 1988; at the same time, the purity range has risen from 50-60 percent to 70 percent.

1988, sec. 2), the figure was as high as 91.²⁰ Some other indicators, such as the number of emergency-room admissions involving particular drugs, have shown similarly large increases; the number of admissions involving cocaine rose from 655 in the first half of 1986 to 2884 in the second half of 1988. No important local indicators went down until late 1989.²¹ That total drug consumption, particularly of cocaine, has risen sharply in the past five years in Washington seems likely.

No systematic estimates of total expenditures on drugs in the Washington metropolitan area exist. A recent *Washington Post* effort to estimate the scale of earnings (some \$8 billion in 1988) points to the problems.²² For example, to calculate heroin expenditures, the author began with a ten-year-old estimate of the number of Washington-area heroin users. Not only may death and aging have significantly reduced that population, but the *Washington Post* calculation also took no account of the substantial period of time each year heroin users spend in treatment or prison, during the course of which their heroin expenditures drop markedly (Ball et al., 1982). For cocaine, the author was forced to rely on an unfounded but much-cited piece of criminal justice lore stating that the police (including custom inspectors, Drug Enforcement Administration [DEA] agents, and so on) seize 10 percent of total drug shipments in the United States.²³

To point to this effort's weakness is easy; to develop any alternative is far harder, and we make no attempt to do so. We need only note at this stage that the Washington market surely generates many hundreds of millions—if not billions—of dollars.

Moreover, numerous journalistic reports exist of young, poorly educated males earning hundreds of dollars a day from selling drugs in the Washington area.²⁴ Drug dealing appears to have added substantially to the set of economic opportunities available to persons with weak legitimate earning opportunities. This change seems to be associated with the cocaine and crack market development, but, as the data in Sec. IV affirm, the same kinds of sellers operate in several different markets.

²⁰For a description of these markets, see Garreau, 1988.

²¹In September 1989, the percentage of arrestees testing positive for any drug fell for the first time; the decline continued for the following six months, the latest reporting period before publication of this report.

²²"Spending for Cocaine Here May Rival That for Food," *Washington Post*, July 19, 1989, p. A14.

²³For estimates suggesting that a much higher percentage is seized by interdiction agencies, see Reuter et al. (January 1988).

²⁴See, for example, "Tracy Fells Held Without Bond in Drug Case," *Washington Post*, February 15, 1989, p. B1.

ANALYTIC FRAMEWORK

That drug markets vary a great deal across drugs and over time points to the need for a theory of how these markets function—in particular, a theory of what determines who enters a market and how much such persons earn from participation. In the next part of this section, we tackle this task, which has been the subject of little explicit analysis.²⁵

Participants in the supply of illicit drugs, whether they be sellers or acting in support roles,²⁶ face various risks: arrest, possibly leading to conviction and incarceration; loss of the gains from their criminal activity, as a result of law-enforcement actions or theft by competitors, suppliers, customers, or deceptive collaborators; and injury or death caused by these other market participants.²⁷ These risks are highly salient, and we suggest that they are important in determining who becomes active in these markets and what the person earns from participation.

Similar risks are also incurred, in slightly different form, by any criminal.²⁸ However, in illegal markets the participants can respond to increases in any of these risks (for instance, higher sentences for drug-dealing convictions, or use of more lethal weapons by other dealers) by raising the price they charge for their service. Persons engaged in burglary, if confronted by increasing risks, may alter their behavior (perhaps by searching for higher-quality targets and committing fewer burglaries), but they cannot alter the available returns to their activity.

The increase in compensation demanded by participants (for example, higher wages by those who hold drugs, or a higher percentage markup by those who sell on consignment) will in turn raise the price of drugs for consumers. If consumption declines only slightly in response to this price increase (that is, demand is very inelastic), total earnings of participants and expenditures by purchasers will rise. If,

²⁵Adler (1985) provides a descriptive study of high-level cocaine and marijuana dealers, but with a primarily sociological emphasis. The purely economic literature on the topic is thin; Rottenberg (1967) provides perhaps the most serious, albeit dated, effort. Belenko, Fagan, and Chin (1989) examine the factors affecting entry of crack users into selling.

²⁶For a good description of the various roles involved in heroin retailing (for example, steering customers to sellers, holding drugs), see Johnson et al. (1985). Fagan and Chin (1989a) provide some detail on cocaine roles.

²⁷Kleiman (personal communication) suggests an additional risk: that of becoming drug dependent. Even if sales activity increases the probability of dependence, this may not be an anticipated risk or one for which (critical to our analysis) compensation is necessary.

²⁸A major difference between provision of illegal goods or services and other crime is that only illegal markets involve competitors. On the other hand, no direct victims exists to serve as complaining witnesses.

on the other hand, consumption declines by more proportionately than the price increase (that is, demand is elastic), total earnings will decline.²⁹

Indirect effects of increased enforcement also deserve mention. If the density of sellers declines initially, buyers have more difficulty finding sellers; this difficulty increases search time and reduces demand. Moreover, each seller is more vulnerable if the total enforcement effort remains higher than before. This vulnerability further adds to enforcement's effectiveness.

The effect on the total number of active supply-side participants depends on several parameters, such as the elasticity of supply of hours of labor by individual participants³⁰ (for drug selling is, like many occupations, compatible with other employment, criminal or legitimate). Current participants might choose to supply fewer hours, or some participants may quit the market altogether.

Participation

As enumerated above, drug-selling risks are highly varied—they include financial, physical, and legal risks. Though knowledge of the risks may be imperfect, and participants may underestimate them, it seems reasonable to assume that participants tend to place a lower value on at least some of these risks than do nonparticipants.

But attitudes toward risk are not the only factors relevant to participation. The quality (earnings, stability, and prestige) of legal jobs (and of other criminal pursuits) is also likely to be an important factor. Since one risk involved is loss of legitimate employment opportunities, persons with prospects for good-quality legitimate employment are less likely to participate in higher-risk distribution activities.

We must also take into consideration neighborhood effects (for example, related to the accessibility of drug-market opportunities). Persons whose neighborhoods and schools have relatively few dealers

²⁹It is generally assumed that the demand for habit-forming drugs such as heroin and cocaine is very inelastic—that is, that the drug dependent who account for most of the quantity consumed will have difficulty reducing their consumption. Though this may be true in the short run, the long-run demand is quite possibly highly elastic. For example, a rise in cigarette taxes will reduce consumption only slightly in the short run, but in the long run it causes a substantial decline in the rate at which teenagers become regular users (Warner, 1984). This relationship may hold true for illicit drugs as well; the long-run price elasticity for cocaine may be quite high.

³⁰Enforcement policy may also affect consumers' purchase patterns. Caulkins (1989) has shown that changing the penalty policy from one in which the penalty rises with the amount purchased to one with a single penalty for possession may lead to larger units (and, more surprisingly, to larger total quantity) being purchased. This would reduce seller risks per unit quantity sold.

are themselves less likely to become dealers. Neighborhoods with many dealers are also likely to be communities in which there is less stigma attached to participation or to acquisition of a criminal record associated with drug selling.

For several reasons, drug use may also contribute to participation. First, heavy users may be able to obtain drugs for personal consumption more cheaply if they buy larger quantities in their roles as sellers: The larger the quantity consumed by an individual, the greater this gain from becoming a seller. Second, use provides access to current sellers and thus facilitates entry into selling; heavy users are likely to have the easiest access³¹ and the most acutely felt needs for the income from drug selling.

We do not intend the above analysis to be a complete theory of who enters the drug-distribution business. Numerous sociological and personality factors also come into play. Our account simply isolates some important variables we can measure and assess.

In general, we hypothesize that persons who enter the business will tend to be willing to accept risks, have poor-quality alternative employment, and know others involved in the trade. These characteristics are associated with youth, poverty, and involvement in various delinquencies. The physical risks, such as the need to defend property without the law's protection, also suggest that males will tend to be more successful than females.

Note that we would also expect differences among drug markets in terms of sellers' characteristics. Marijuana, with its lower risks (particularly physical) and more diffuse use throughout the population, should correspondingly have a more heterogeneous population of sellers than heroin or cocaine. Marijuana sellers may also have a broader range of attitudes toward risk. Because such a wide range of persons have ready access to the drug,³² less of a barrier to middle-class participation exists.

We might also expect that changes in the setting of drug markets could affect the dealer population's characteristics. A police crackdown (that is, an increase in the risk of arrest and imprisonment) might increase the selectivity in terms of legal risks, while an increase in participant violence may increase selectivity in terms of physical risks.

³¹Note that this fact is not inconsistent with the claim that crack sellers avoid crack use because they perceive such use as generating erratic behavior that may lead to default and/or police attention. Even crack sellers show high rates of involvement with other drugs before selling crack.

³²More than 80 percent of high school seniors report that marijuana is available or readily available, compared to only 45 percent reporting similar availability for cocaine (Johnston, O'Malley, and Bachman, 1987).

Note again that participation can be graduated in terms of time. Selling may be an occasional or full-time activity, and it may be a complement to other employment, criminal or licit. By altering the amount of time devoted to selling, an individual may correspondingly control his risk. One individual-level response to a crackdown may indeed be to continue participation but to decrease the number of hours (transactions) supplied.³³

Participation also need not be a lifetime commitment. A common pattern of minor delinquency, particularly for males, is involvement for a period during adolescence and then gradual cessation. Drug selling, though a more serious offense, may also be a phase in an individual's career, perhaps terminating as the young adult acquires access to better-quality legitimate opportunities and following first arrest or conviction. Age, perhaps accompanied by household formation, may also lead to declining willingness to incur some of the relevant risks.

However, this pattern is likely uncommon, for two reasons: the reputedly high returns from participation, and the likelihood that the seller also becomes accustomed to heavy use of expensive drugs. Both these facts make desistance more difficult. On the other hand, the extensive violence in the trade may lead an individual to leave as he ages; by then, with an extensive criminal record and history of drug use, the leaving may be to less attractive (and less violent) criminal activities.

The Organization of the Business

Our research focuses on individual participation and earning rather than on the structure of drug markets. Nonetheless, we should explore structure at least briefly since it can have important consequences for compensation.

The old images of highly centralized and controlled drug-distribution systems have largely disappeared (see the President's Commission on Organized Crime, 1986) in face of the growing evidence of competitive violence and the failure of individual organizations to endure in dominant positions. In Washington's case, the city recently witnessed the trial and conviction of Rayful Edmond III, a 24-year-old District native who created an organization that imported hundred-kilogram ship-

³³Thus, increased selectivity in terms of risk attitudes may not be reflected in changes in the dealer population, but in the hours of dealing (or number of transactions) provided by dealers categorized according to their attitudes toward different kinds of risks. If experience enables individuals to mitigate risks per transaction, increased enforcement may also affect the dealer population's composition in terms of experience levels, with higher enforcement favoring more experienced dealers over newer ones.

ments of cocaine into the city from Los Angeles and marketed it through a hierarchical system of distributors.³⁴ The speed of Edmond's rise and fall points to the fragility of the new generation of drug-dealing organizations. They are subject to very serious threats from law enforcement. Whatever the concerns with corruption among the contemporary police, drug dealers are unable to purchase the systemic and comprehensive protection that was available to so many of their bootlegging and gambling predecessors;³⁵ they are at serious risk of arrest and prosecution. In addition, Edmond's counterparts in the earlier bootlegging and gambling markets did not face much prospect of long prison sentences for selling those goods or services; Edmond received a life sentence, an increasingly common fate of senior traffickers sentenced in federal courts.

Johnson et al. (1990) have suggested that larger and more hierarchical organizations will emerge in the retail crack market as it matures. However, two factors make this outcome unlikely. First, without the ability to buy large-scale corruption from law-enforcement agencies, the leader of a large organization is at risk from his numerous employees, any one of whom can turn informant. Second, the erratic behavior of so many heavy drug users in the crack trade makes for a particularly difficult management problem; successful long-term entrepreneurs are likely to be those able select a small number of reliable subordinates.

Thus, analysis of the returns to participation in the drug trades is not much complicated by the existence of monopolistic organizations. In most cities, entry into the drug-selling business seems relatively easy, requiring little capital or skill beyond that which is acquirable through familiarity with the trade and its members (see Williams, 1989). Low-level dealers are not apparently subject to systematic extortion by broad-based criminal syndicates.

Note too that gangs seem to play a minor role in Washington, either in drug markets or in juvenile delinquency in general. This situation differs from those in several other major cities (notably in California cities, where youth gangs of varying degrees of permanence have become important sources of organizational resources for drug retailing [Skolnick et al., 1989]). Again, this simplifies analysis, because no larger organization captures economic rents or directs individuals into particular activities.

³⁴"Edmond Convicted on All Counts in Drug Conspiracy Case," *Washington Post*, December 7, 1989, p. A1.

³⁵On the role of corruption in gambling markets, see Haller (1979).

Determinants of Earnings

Individual earnings from drug selling are determined by the usual economic factors, including demand for the goods, supply of labor with appropriate skills, and availability of substitutes for the goods involved. As more persons enter the business, perhaps attracted by the high reported incomes, increasing competition should drive down the marginal returns from participation.³⁶ However, the existence of physical risks from other participants, and the possibility that individuals need compensation to incur those risks, introduces a potentially important complication. If increased competition generates greater violence (perhaps the result of disputes over territory³⁷), the increased supply of labor may actually raise prices.³⁸

Note that much depends here on the relevant population's attitudes toward particular kinds of risks. If the potential sellers see the violence of drug markets as a means by which a young man proves his worth, then a basic assumption of our analysis fails. The increasing violence, generated by a rising supply of drug sellers of a certain type, may attract still more sellers into the market, with a further decline in earnings. Such a situation has important policy implications: If intensified enforcement also raises the level of violence, as may be the case for certain kinds of street-level enforcement, increased enforcement may also increase the availability of drugs.

Given the growth in drug consumption and its relative newness, we must also pay attention to the market's dynamics. The early sellers may benefit from having been pioneers, extracting economic "rents" from entering the market before it reached long-term equilibrium (very much as did the current manufacturers of oat-bran cereals when the federal government reported evidence that eating these cereals could reduce the likelihood of heart attack). Over time, as more sellers enter the market, competition eliminates these rents unless barriers to entry, such as violence (in the case of crack), exist.

³⁶The decline should show up in returns per hour or transaction; the effect on total earnings depends on how many hours/transactions an individual supplies.

³⁷Territorial disputes are at least partially generated by the lack of enforcement of property rights. Whereas desirable locations are allocated to legitimate uses by a pricing mechanism, drug dealers may be able to obtain them only through violence.

³⁸Assume that the supply curve for drug-selling labor shifts, perhaps because of a decline in the quality of legitimate earnings opportunities. The increased entry will result in an initial decline in earnings but also in an increase in violence; this may cause some sellers to leave, creating a new equilibrium that differs from the initial one in that it has a higher level of violence, higher prices and wages, but a smaller volume of sales. In effect, the remaining participants collect quasi-rents as a result of the market's "bad reputation."

The introduction of crack into the Washington market is quite recent. Urinalysis data on arrestees show a sudden decline in the prevalence of PCP and heroin in late 1987, consistent with the MPD observation that crack only became widely available locally at that time. If we observe, in late 1988, that drug sellers—in particular, crack distributors—are earning very high incomes, after taking account of risks and other costs, these incomes may represent precisely such rents to early entrants.

Rents should induce entry, in the absence of any barriers to such entry. Except for violence, probable barriers are hard to identify. The drug trades generally work on revolving credit, and, without long-lived gangs of the sort that may have controlled the heroin trade's upper levels in some cities in the 1960s, licensing (paying for the right to sell) is not a likely requirement for entry. Entry will be affected by potential sellers' knowledge of the available returns (and risks).³⁹

The Demand for Drugs

We know very little, in an economic sense, about the demand for illicit drugs. Data on the intensity of drug use in broad categories (for example, marijuana consumption at least once per week) are available through the National Household Survey (National Institute on Drug Abuse [NIDA], 1989) but only by age/race/sex and region, at least in the published data. We have no basis for estimating what share of total consumption of any drug is accounted for by heavy users as compared to light users, or by any particular income category.⁴⁰

Nor do we have any data on where different classes of users purchase their drugs, an information gap noted in the recently published *National Strategy* (Office of National Drug Control Policy, 1990). As already suggested, the street markets we will be studying are only part of the drug-distribution system. The groups they serve may include the following:

- *Only certain classes of users.* For example, affluent and regular users of cocaine can likely find sources willing to provide them with the drugs without requiring them to make trips to hazardous locations. The less affluent and/or less regular buyers then become the purchasers in these markets.

³⁹Note that information about risks and returns may be derived independently. Potential sellers can observe arrest, injury, and imprisonment more easily than they can actual earnings. If sellers are prone to overstating earnings, which seems likely among the young, their friends may overestimate those earnings while having an accurate assessment of the risks.

⁴⁰These data are apparently collected by National Household Survey interviewers but are not included in publications from the survey.

- *Most types of users, but only early in their careers.* New non-poor users may enter these street markets as they become more regular in their use and can no longer reliably depend on the friends who initiated them into the drug. Over time, as these new users become more embedded in networks of regular users, they are able to find cheaper and safer sources.
- *Many users, but only occasionally as emergency outlets.* Cocaine is a binge drug. During a binge, users may frequently run out of supplies and want to obtain the drug rapidly. The urgency of their demand at that moment makes them less sensitive to the risks of using street markets. In effect, these markets serve the same function as a convenience store.

All the above may be components of the demand for street-market services. Each component may change over time as a share of the total demand for drugs. For example, if the primary nonpoor-user demand in the street markets is from new initiates, demand will be very sensitive to the flow of new users rather than to total consumption. If growth in cocaine consumption comes from current users' increasing their annual intake rather than from increasing numbers of initiates, street markets may decline. Similarly, as the market matures and the number of nonpoor users grows, they may become less reliant on street markets as the likelihood of finding their own source grows.⁴¹ This may reduce the need for convenience store-like purchases.

These street markets may also be fueled primarily by demand from the poor and near-poor, who finance their purchases in the same way heroin users do. Thus, one reason we have estimated the total earnings from property crime in Washington is to consider the possibility that the demand for street-market services may be heavily supported by earnings from property crime.

Conclusion

In this subsection, we have attempted to provide the analytic framework that shaped the data collection and analysis we report in the following sections. The framework is essentially an economic model of market behavior, but it has attempted to take into account the social realities, such as drug use and the dependence it may create, that shape individual behavior in ways difficult to capture in conventional economic form.

⁴¹The possibility also exists of increasing "group" purchases, in which one member of a group of friends accepts the responsibility for buying on behalf of all members. By making bulk purchases, such a buyer is able to get the drugs more cheaply and reduce the total group risk; this sort of activity reduces street-market demand, too.

III. THE DRUG-DEALING POPULATION

How many persons are involved in drug selling in Washington? What are their demographic and socioeconomic characteristics? In this section, we analyze data on the population of persons charged, between 1985 and 1987, with selling drugs in the District of Columbia. With some caveats, these data allow us to make a lower-bound estimate of the number of drug sellers and a similar estimate of how many persons of particular kinds are involved in the trade. The data also permit us to describe the educational attainment and employment rates of persons caught selling drugs.

The District of Columbia Pretrial Services Agency collects data on persons who pass through the central lockup (the vast majority of those arrested on serious charges); these data cover not only these persons' criminal careers, but also their education, residence, current employment status, and earnings.¹ The PSA provided RAND with a data tape for the 1985-1987 period. We used these data to describe the population charged with drug selling and to estimate the number of persons who were involved, at least occasionally, in drug distribution in the District during that three-year period.

We can easily summarize the section's major findings. First, the population of District residents charged with drug selling was predominantly young and male and was overwhelmingly black (99 percent). Second, drug selling was increasingly important for successive cohorts of 18-year-olds during the 1980s; of black males born in 1967 who had any criminal charge, almost half had received at least one drug-distribution charge. For the 1967 birth cohort, we estimate further that approximately one person in six was charged with drug selling between the ages of 18 and 20. Third, the drug sellers showed a lower high school completion rate than did the rest of the charged population, but the difference was modest and drug sellers were as likely as others to be employed at time of arrest. Finally, drug sellers showed only moderate specialization in that activity; an individual charged with drug selling was as likely to be charged next with a nondrug charge as with a drug charge.

¹Appendix A contains a more complete description of the PSA data.

THE SIZE AND COMPOSITION OF THE CHARGED POPULATION

The period 1985–1987 was the peak of an extended crackdown on drug selling in the District. By 1987, drug cases accounted for more than half of all felony indictments by the local prosecutor. In 1988, the intensity of drug enforcement declined from its peak, though it remained well above the level of the early 1980s. Table 3.1 presents the numbers of arrests for drug offenses in the District of Columbia from 1981 to 1987, during which time the total number of drug arrests almost doubled. More important than the rising total is the dramatic increase in the number of arrests for the more serious offense, sale and manufacture of drugs (essentially drug trafficking), as opposed to drug possession; that number rose from 408 in 1981 (close to its average during the late 1970s) to 5,297 in 1987. Table 3.1 also includes figures on juvenile drug arrests to provide some evidence of the increasing importance of drug arrests for the younger population; unfortunately, the PSA tape does not include data on juvenile arrestees, so no analysis of this group is possible.² Juvenile distribution arrests grew even faster than did adult distribution arrests.

Counts of the number of *arrests* do not provide estimates of the numbers of *persons* arrested. An individual can be arrested more than once for a drug offense in the one year. The PSA tape permits us to

Table 3.1

ARRESTS FOR DRUG OFFENSES, DISTRICT OF COLUMBIA, 1981–1987

Year	Adult			Juvenile		
	Total	Possession	Distribution	Total	Possession	Distribution
1981	6,408	6,000	408	343	285	58
1982	6,871	4,947	1,924	316	234	82
1983	8,061	5,022	3,039	439	335	104
1984	8,456	4,729	3,727	635	450	185
1985	8,649	5,434	3,215	630	410	220
1986	12,058	7,000	5,058	1,222	943	279
1987	11,066	5,769	5,297	1,894	344	1,550

SOURCE: Office of Criminal Justice Plans and Analysis.

²Nor did the PSA data include the juvenile arrests of the adult arrestees.

count how many different persons (adults only) were charged³ with drug offenses each year from 1985 to 1987. Table 3.2 contains those figures for each year, together with the total number of persons charged with a nondrug offense.⁴

Over the three-year period, a total of 24,116 different persons were charged with drug offenses, or 49 percent of the 49,582 persons charged with some criminal offense. Of persons charged with drug offenses, 60 percent (14,544) were charged with the more serious distribution offense.⁵ Of the 14,544 persons charged with at least one drug-selling

Table 3.2

PERSONS CHARGED WITH CRIMINAL OFFENSES, 1985-1987

Year	Drug Distribution	Drug Possession	Other Felony	Other Misdemeanor	Total
1985	3,807	3,186	5,615	4,470	17,078
1986	5,842	3,896	5,866	4,936	20,540
1987	6,922	4,207	6,468	4,956	22,553
1985-1987	14,544	9,572	14,385	11,081	49,582

SOURCE: Pretrial Services Agency.

NOTE: "Drug Distribution" includes a small number of felony drug charges not classified as either sale or possession; "Drug Possession" includes a small number of misdemeanor drug charges not classified as either possession or sale.

³The nature of the PSA tape makes it easier to work with charge, a postarrest status, than with arrest. Not everyone arrested is subsequently charged; all those charged have been arrested. The charge here is a prosecutorial decision.

⁴Throughout this section, we use a hierarchy rule for classifying persons. We classify an individual as a drug-distribution charge if he has such a charge, though he may have any number of other charges. We classify an individual as a drug-possession charge if he has at least one such charge but no distribution charge; he may have any number of non-drug charges. An individual is categorized as a nondrug felony if he has at least one such charge but no drug charges. A nondrug misdemeanor charge is a person with no other kinds of charges. Note that this hierarchy rule is different from that used by the Metropolitan Police Department in its arrest reports; the MPD reports would list an arrest that included a violent felony charge and a drug-distribution charge as an arrest for the violent offense. Thus, we may find in any one year that the number of persons counted in the PSA file as charged with drug distribution exceeds the number of arrests counted by the MPD as drug selling. See App. A for details of the classification.

⁵We classified possession with intent to distribute (PWID) as a distribution offense; the Uniform Crime Reports (UCR) appear to classify this as a possession charge (though it is, except under special circumstances, a felony charge). The reclassification was based on the nature of the circumstances under which such charges are made, as well as on the felony status. This category includes 46 percent of all distribution charges. This may explain why the PSA data show substantially more drug-distribution charges than the MPD shows drug-distribution arrests during the three-year period. When the PWID charges are shifted from distribution to possession, the PSA distribution charges are

offense, 4060 (28 percent) were charged with more than one such offense; 7.5 percent had three or more drug-selling charges in the period. Recidivism with respect to this specific offense is quite high. Table 3.3 shows the incidence of drug-selling charges.

Table 3.4 reveals some characteristics of the different charged groups. For all groups, the population was heavily male, black, young, and resident in the District of Columbia. The drug distributors were substantially more likely to have each of those characteristics; the misdemeanor group, substantially less likely.

Because our primary focus is on the District—that being the population best described in our two other major data sets—we have separated persons resident in the city⁶ from the total population of persons in the PSA data. In the remainder of the section, we deal with just the resident population; first, however, we present some information about the population of nonresidents charged with drug offenses.

Table 3.3

INCIDENCE OF DRUG-SELLING CHARGES,
BY NUMBER OF CHARGES, 1985-1987

Drug Sale	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1	10,484	72.1	10,484	72.1
2	2,959	20.3	13,443	92.4
3	813	5.6	14,256	98.0
4	218	1.5	14,474	99.5
5	53	0.4	14,527	99.9
6	12	0.1	14,539	100.0
7	3	0.0	14,542	100.0
8	0	0.0	14,542	100.0
9	1	0.0	14,543	100.0
10	1	0.0	14,544	100.0

SOURCE: Pretrial Services Agency.

fewer than the number of distribution arrests for each year. However, the number of possession charges slightly exceeds the MPD total.

⁶Many persons arrested provide a multiplicity of addresses (a mailing address, a mother's home address, an address for the most recent residence, and so on), reflecting the instability of their lives. We classified an individual as a District resident if he reported that he had been a resident for at least one year. This conservative convention may have misclassified some District residents as nonresidents. See App. A for details of this classification.

Table 3.4

CHARACTERISTICS OF ALL PERSONS CHARGED WITH DRUG
AND OTHER OFFENSES, 1985-1987
(Percent)

Characteristic	Distribution	Possession	Felony	Misdemeanor
Male	88.3	82.9	83.7	72.0
Age 18-24	40.1	30.9	30.9	30.8
Age >30	30.6	35.3	40.1	41.4
Black	97.1	84.8	86.0	72.3
D.C. resident	78.6	58.3	65.2	55.6
Total number:	14,543	9562	14,377	11,072
Grand total number: 49,554				

SOURCE: Pretrial Services Agency.

Nonresidents accounted for 21 percent of those charged with drug selling, compared with 42 percent of those charged with drug possession and 35 percent of those charged with a nondrug felony. These figures are consistent with the popular notion that the District serves as a distribution center for suburban residents.⁷ On the other hand, the number of nonresident sellers charged in Washington is substantial—3114 over the three-year period. Note that the total number of drug-trafficking arrests in the Maryland suburbs and northern Virginia in 1986 was only 1700.⁸ The District may charge more suburban residents with drug selling than do the suburban jurisdictions.⁹

The nonresidents charged with drug offenses in the District were generally similar in their demographic characteristics; the only major difference was in the racial composition. Whereas only 1 percent of resident drug sellers were white, 10 percent of the nonresidents fell into that category. The difference was even greater among persons charged with drug possession: 30 percent of the nonresidents were white, compared with only 4 percent of the residents.

⁷A more complete analysis would require data on the share of suburban possession and distribution arrests that involve District residents. For a full description of the flow of sellers and buyers between jurisdictions, data from other than criminal justice sources are necessary.

⁸These are counts of arrests for each year, not of the numbers of individuals arrested. Because many individuals are arrested more than once for drug selling in a three-year period, the total number of nonresident selling arrests in the District will be substantially higher than the number of individuals charged. Some of those charged by the suburbs may also be District residents.

⁹Note that Prince George's County accounts for most of the suburban drug arrests and that the border dividing the District from Prince George's runs through a relatively dense neighborhood that is very similar on its two sides.

Table 3.5 shows the total number of District residents charged with drug selling, possession, and other offenses; it also includes information on age, race, and gender composition. The striking feature of the group charged with drug-selling offenses (as opposed to other kinds of offenses) is that its members are so young (40 percent are aged 18–24), male (seven out of eight), and black (approximately 99 percent of those charged with selling drugs are recorded as black, compared to 93 percent for nondrug felony charges and 87 percent for nondrug misdemeanors). A total of 4517 black males between the ages of 18 and 24 were charged with drug-selling offenses in the three-year period; as we shall see, this is a substantial percentage of all black males resident in Washington in this age group.

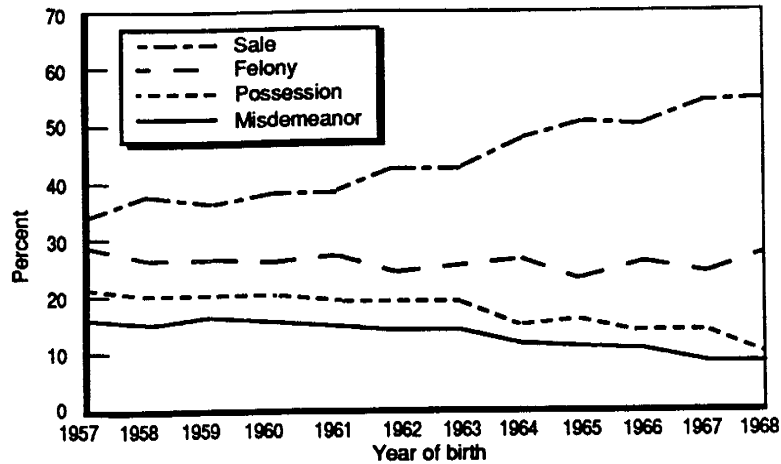
The high percentage of black District males in the population charged with drug selling may reflect the much higher poverty rates of blacks in the District and the high fraction of blacks among males in the high-risk years. In 1986, 82 percent of persons living in poverty in the District of Columbia were black. Further, in the age group 20–24, 80 percent of males were black; this figure compares with 66 percent of blacks in the total population. The percentage of young males who grew up in poverty households—the group we believe to be at the very highest risk of involvement in street drug selling—may be even higher.

To better understand drug selling's importance for young criminal offenders, we calculated, for each successive birth cohort from 1957 to 1968, what percentage of residents charged with a criminal offense had at least one drug-selling charge between 1985 and 1987. Figure 3.1 shows that the share rises almost uniformly for successive age cohorts.

Table 3.5
CHARACTERISTICS OF RESIDENTS CHARGED WITH DRUG
AND OTHER OFFENSES
(Percent)

Characteristic	Distribution	Possession	Nondrug Felony	Nondrug Misdemeanor
Male	87.5	82.1	83.9	71.2
Age 18–24	39.7	29.3	29.2	27.9
Age >30	31.0	38.2	41.3	43.1
Black	99.1	95.8	93.3	86.5
Total number:	11,430	5578	9380	6158
Grand total number: 32,546				

SOURCE: Pretrial Services Agency.



SOURCE: Pretrial Services Agency.

Fig. 3.1—Distribution of criminal charges, by year of birth, black resident males aged 18-29

That is, for persons born in 1968 who had a criminal charge, 54 percent had at least one drug-distribution charge; for persons born in 1957, the figure was only 35 percent.

When we add all drug charges together, 68 percent of the 1968 cohort had at least one drug charge among their charges. For the 1957 cohort, the comparable percentage was 55. Note that the cohort share with a drug-possession charge rose with age—only 13.7 percent of the 1968 charged cohort had such a charge, compared with 21.2 percent of the 1957 charged cohort. Thus, older cohorts are also heavily involved with drugs (as data from urinalysis of arrestees suggest) but play less of a role in drug selling.¹⁰

We cannot determine whether this pattern is truly an effect of age (that is, that it will hold for all future comparisons of 18-year-olds and 29-year-olds) or represents a change in behavior of incoming cohorts. Given the recency of drug-market growth, the 1968 cohort would quite likely be more involved in drug selling at age 29 than was the 1957

¹⁰An alternative explanation is that older drug distributors are better at avoiding the more serious distribution charge; for example, they may hold smaller amounts of drugs at any one time so that in case of arrest, they will only be charged with possession. However, note that we included charges of possession with intent to distribute in the distribution rather than possession category.

cohort. This hypothesis received modest support when we compared age-specific arrest composition figures for 1986 and 1987. For these years, we compared the shares of a particular age group (charged with a criminal offense) charged with a drug offense. For example, we calculated the share of 20-year-olds whose charges in 1986 included a drug charge (cohort of 1966) and the share of the same age group that had such a charge in 1987 (cohort of 1967). The relevant figures are in Table 3.6. It includes 11 such comparisons; only 3 show a decrease between 1986 and 1987, suggesting that each successive cohort is increasingly involved with drugs.¹¹

DRUG CHARGES: RISKS FOR YOUNG BLACK MALES

One way of expressing the significance of drug distribution to particular population groups is to examine the probability that an individual in that group will be arrested early in his or her adult life for selling drugs. Given that young black males account for the overwhelming share of all

Table 3.6

PERCENTAGE OF PERSONS WITH DRUG CHARGE,
GIVEN SOME CHARGE, BY AGE, 1986 AND 1987

Age	1986	1987	Difference 1987 - 1986
19	61.8	68.1	6.3
20	62.4	60.7	-1.7
21	61.6	63.3	1.7
22	58.6	62.0	3.4
23	58.0	58.2	0.2
24	57.2	58.8	1.6
25	56.7	54.9	-1.8
26	52.8	55.9	3.1
27	54.9	57.4	2.5
28	56.5	56.1	-0.4
29	52.0	52.4	0.4

SOURCE: Pretrial Services Agency.

¹¹We restricted the comparison to 1986 and 1987 because in those two years, the share of all charged persons with a drug charge grew only slightly (from 28.4 percent to 30.6 percent). The 1985 figure was a great deal smaller, making a comparison of age-specific rates less meaningful.

persons charged with drug distribution (and that the numbers are so large), we focus our analysis on black males aged 18–29.¹²

Table 3.7 presents the basic data for the risk calculation. The final column contains an estimate of the cohort's total size—that is, the number of black males resident in the District of Columbia in 1986 (the midyear for our data) who were born in a particular year. The figures are based on estimates by the District of Columbia government¹³ and include some adjustment for undercounts in the 1980 census,¹⁴ which served as the estimates' basis. The third through sixth columns present figures on the number of persons in each cohort charged with different kinds of offenses (using our hierarchy rule) between 1985 and 1987; the seventh column shows the number charged with at least one criminal offense.

Table 3.7
NUMBER OF BLACK MALE DISTRICT RESIDENTS
CHARGED IN 1985–1987, BY YEAR OF
BIRTH AND TYPE OF CHARGE

Age in 1986	Year Born	Number Charged For				All Charges	Total Population
		Drug Sale	Drug Posses- sion	Non- drug Felony	Non- drug Misd.		
	1957–1968	6,384	2,463	3,842	1,829	14,518	50,385
18	1968	505	88	255	78	926	3,440
19	1967	610	154	267	94	1,125	3,747
20	1966	654	176	339	138	1,307	4,067
21	1965	647	196	306	134	1,283	4,174
22	1964	609	187	347	142	1,285	4,529
23	1963	548	233	327	170	1,278	4,545
24	1962	535	240	316	162	1,253	4,483
25	1961	500	232	364	180	1,276	4,543
26	1960	468	234	331	179	1,212	4,463
27	1959	463	247	337	200	1,247	4,225
28	1958	443	231	316	170	1,160	4,074
29	1957	402	245	337	182	1,166	4,095

SOURCE: Pretrial Services Agency.

¹²For white male residents, the risks of a drug charge are minimal at all ages.

¹³For a discussion of the bases for these estimates, see App. A.

¹⁴For example, Passell, Siegal, and Robinson (1982), estimate the undercount for black males to rise from approximately 1 percent (for those aged 18) to 12 percent (for those aged 29).

Table 3.8 converts these figures into risks of arrest. For example, of persons born in 1957, 9.8 percent were charged with a drug-selling offense in the period 1985-1987. The risk for successive cohorts fluctuates around 11 percent from 1957 to 1963, then rises almost uniformly until 1967, when it reaches 16.3 percent; the 1968 cohort figure is lower than that for 1967 because the 1968 cohort was not generally eligible for adult arrest in 1985.¹⁵ Comparing the drug-distribution charge rates for particular age groups in successive years is also interesting. The last entry, for example, shows that 12.6 percent of persons aged 19 in 1987 (1968 cohort) were charged with drug distribution, compared to 10.2 percent of those aged 19 in 1986 (1967 cohort). For the 11 age groups in these data, the 1987 drug-distribution charge percentage was higher for 9 of these groups when compared to the 1986 percentage. This again points to the rising importance of drug selling for the young.

The data also permit estimates of the risk that a black male of a particular age (18-29) resident in the District might be charged with a criminal offense, drug or otherwise, in the three-year period 1985-1987.

Table 3.8

PERCENTAGE OF BLACK MALE RESIDENTS CHARGED IN 1985-1987,
BY YEAR OF BIRTH AND TYPE OF CHARGE

Type of Charge	Year of Birth											
	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Any charge	28.5	28.5	29.5	27.2	28.1	28.0	28.1	28.4	30.7	32.1	30.0	26.9
Drug sale												
1985-1987	9.8	10.9	11.0	10.5	11.0	11.9	12.1	13.4	15.5	16.1	16.3	14.7
1985	3.3	3.1	3.2	2.9	3.1	3.5	3.6	3.8	3.9	5.0	3.1	0.1
1986	3.9	4.4	4.8	4.3	4.9	4.8	5.2	5.6	7.4	7.6	8.0	5.6
1987	4.2	5.0	5.1	4.8	4.9	5.6	5.7	6.2	6.9	7.5	8.5	10.8
Any drug ^a												
1985-1987	15.8	16.5	16.8	15.7	16.1	17.3	17.2	17.6	20.2	20.4	20.4	17.2
1985	5.9	4.9	5.6	4.9	5.0	5.7	5.5	5.3	5.9	7.0	4.4	0.1
1986	6.2	7.0	7.5	6.6	7.6	7.2	7.7	7.5	9.6	10.1	10.2	6.9
1987	6.8	7.2	7.7	7.2	6.9	8.0	7.8	8.5	9.5	9.4	11.0	12.6

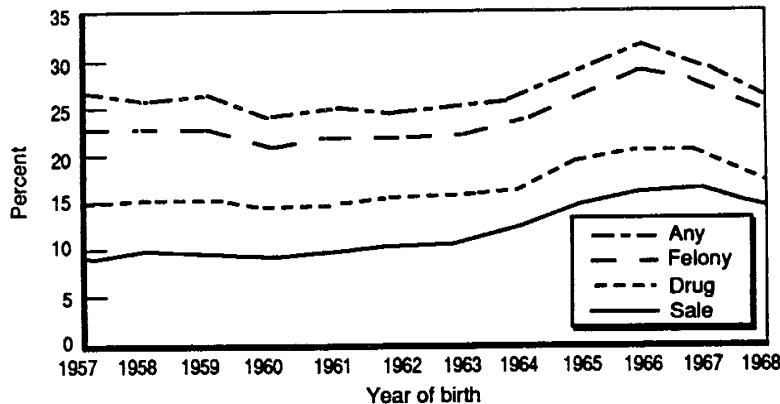
SOURCE: Pretrial Services Agency.

^a"Any drug" charge includes both possession and distribution.

¹⁵Some juvenile arrestees are treated under adult law each year; they constitute a small fraction of the 17-year-old arrestees.

That fraction is almost one-third for persons aged 19 in 1986. It does not decline noticeably over the age range 20–29, as other studies of crime rates in the general population have suggested (Blumstein and Cohen, 1979); we have no explanation for this difference, except possibly for the new attractiveness of drug selling. Figure 3.2 conveys the major three-year results of Table 3.8 in graphic form.

The figures on probability of first adult arrest for young adults (that is, the data for the 1967 cohort) appear high. In light of this, comparing the results with other recent studies is helpful. For example, Tillman (1987), using California state data, analyzed the experiences of persons born in 1956 and arrested between 1974 and 1985. He found that 66 percent of black males were arrested between the ages of 18 and 29, compared with some 34 percent of white males. For the age range 18 to 20, he found that approximately 25 percent of black males had some arrest; nearly 15 percent had an arrest for an “index” offense (that is, a nontrivial violent or property crime¹⁶). An arrest for a drug-distribution or possession offense would not be classified as an index arrest. Tillman’s data cover a cohort earlier than those our analysis considers and one that came to adult status before the growth of street drug markets. To that extent we may derive a little comfort



SOURCE: Pretrial Services Agency.

Fig. 3.2—Black male residents charged, by year of birth

¹⁶The characterization is a broad one. Simple assault is not an index offense; shoplifting can be.

from the fact that the rates in the District sample are not much higher than those for the earlier California cohort; note, though, that the District data refer to "charge," a postarrest event, so the District figures are an understatement of the probability of arrest.¹⁷ Blumstein and Graddy (1981-1982) also report comparably high proportions of black males being arrested for index offenses by their late 20s; in their data the cumulative probability reached approximately 45 percent.¹⁸

More recently, Mauer (1990) estimated that 23 percent of black males aged 20-29 were under correctional supervision on a given day in 1989 in the United States. This includes persons on probation or parole as well as in jail or prison. Note that this estimate is based on data on the composition of the sentenced population 1983-1986 and is adjusted to reflect the increase in the total population under correctional supervision. Because the base data precede a major increase in the share of drug offenders among the correctional population, 23 percent may well be an underestimate for young black males. Note too that this estimate is for a point in time and so understates how many of any population group are subject to correctional supervision over a three-year period. Finally, we note that the National Longitudinal Survey of Youth, a sample of 12,000 persons aged 14-21 in 1979, also reports high rates of incarceration for young black males. In a seven-year period, 10.5 percent of black males in the sample reported being in jail at some time; for white males, the figure was 2.4 percent (Hill and O'Neill, 1990). Some of the sample were juveniles for much of the seven-year period. Thus, our data for the District of Columbia are consistent with the levels of criminal charging appearing in other studies.

¹⁷With the three years of data available to us, only with strong and questionable assumptions can we calculate the probability that a black male District resident will be charged between the ages of 18 and 29. Assuming that the probability of first charge is the same as that of later charge and that probabilities are the same for each cohort, we estimate that the risk of being charged with any criminal offense between the ages of 18 and 29 is some 58 percent; for a drug-selling offense, the total risk is 30 percent. However, important cohort differences curtail the authority of these estimates. Younger cohorts appear to be more heavily involved in drug offenses than are older cohorts. Moreover, our data bear only on persons arrested during the period 1985-1987; thus, we will not count persons from pre-1967 cohorts who were arrested earlier but not during this period.

¹⁸The Blumstein and Graddy estimates are not directly comparable because they include juvenile arrests. Thus, relatively few 18-year-old black males (4.3 percent) were recorded as first-time arrestees; 27 percent of the cohort already had a juvenile arrest by that age.

EDUCATION AND SPECIALIZATION OF DRUG SELLERS

The data on the PSA tape do not permit classification of individuals by poverty status.¹⁹ However, information on education and employment status (see App. A) permits some rough categorization of individuals by risk of poverty.

Education and Employment

Table 3.9 contains data on the percentage of black males aged 18-29 (in 1986), falling into various offender categories, who had not completed high school and/or were unemployed at the time of arrest.²⁰ Note that for the entire population of charged persons in this age/race/sex category, only three in seven (43 percent) had completed high school, while 31 percent reported no current employment at least half the time they were asked that question between 1985 and 1987. Later in this section, we present data on the baseline rates of high school completion for the comparable population groups.

Of persons charged with drug sales, 36 percent had a high school education; this compares with 45 percent for those charged with

Table 3.9

EDUCATION AND EMPLOYMENT, BY DRUG AND NONDRUG CHARGES,
DISTRICT BLACK MALES AGED 19-29
(Percent)

Category	Charge Type			
	Drug Sale	Drug Possession	Nondrug Felony	Nondrug Misdemeanor
Employed	67	74	68	69
Completed high school	35	51	44	53

SOURCE: Pretrial Services Agency.

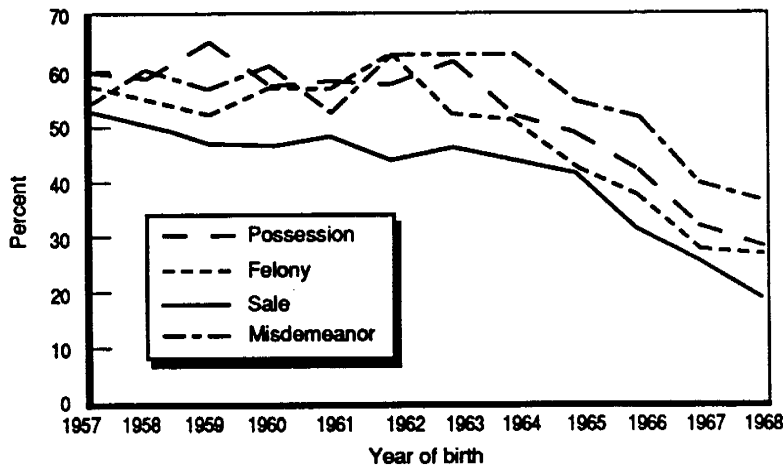
¹⁹The address information would, in principle, allow for classification by the poverty status of census tract of residence (see Ricketts and Sawhill, 1988). However, cost of merging the address information with a map of census areas by percent living in poverty was prohibitive.

²⁰We classified an individual as not having finished high school if he reported less than 12 years of schooling or reported a general equivalency diploma (GED); moving persons with a GED to the high school completion category made little difference to the analysis. We classified an individual as unemployed if he reported being unemployed at least half the time he passed through the PSA between 1985 and 1987.

nondrug felonies. The employment status differences are less striking: Of persons charged with drug sales, 33 percent were classified as unemployed, compared with 31 percent for nondrug felonies. For drug possession, 51 percent had completed high school and 26 percent were unemployed.

These figures suggest that drug selling is more attractive than other serious offenses to persons with weaker labor force opportunities (as indicated by the lack of a high school diploma). However, the drug-selling group is younger, so the lower high school completion rate might be an artifact of a lower graduation rate for younger adults. The percentage of the charged population having completed high school falls precipitously for cohorts after 1963; the 1967 cohort reports a completion rate of only some 33 percent, compared to 55 percent for the 1957 cohort. Analysis of age-specific high school completion rates (see Fig. 3.3) shows that the completion rates are lower for drug sellers in every cohort.

Interpreting the data on high school completion rates across age groups requires particular care. First, the low high school completion rates for the 1967 and 1968 cohorts may be affected by many group members' still having been enrolled in high school in 1985 and 1986; the average age of graduation from high school for black males is closer



SOURCE: Pretrial Services Agency.

Fig. 3.3—Arrested offenders' high school completion rates, by charge type and year of birth

to 19 than 18. Analysis of the Current Population Survey (CPS), as reported in National Center for Educational Statistics (1988), shows that in any year the self-reported high school completion rate for black males aged 20–24 is typically 15 percent higher than that for black males aged 18–19. We have been unable to identify data on the same rates for the District of Columbia or for urban blacks only.

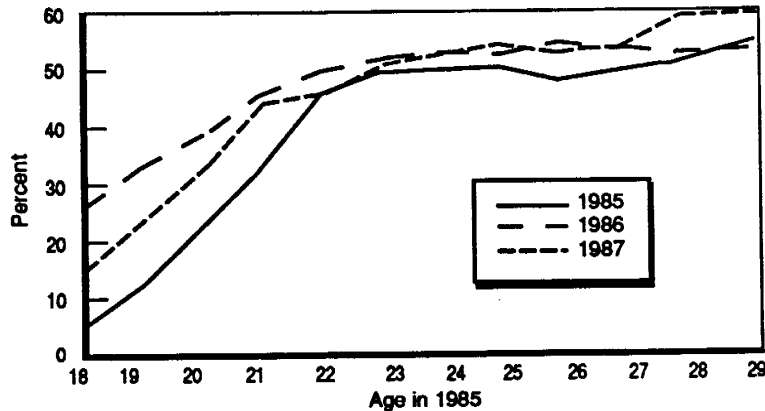
Nonetheless, the differences between the older and younger cohorts are greater in the charged population than we would expect if we were sampling from the black male population in general. For example, the difference in the PSA population between high school completion rates of persons aged 20–24 and persons aged 18–19 in 1986 was approximately 38 percent—substantially more than the percentage difference found in the CPS data.²¹ We cannot explain this difference simply by the PSA population's criminal charge; adult criminal activity would explain lower rates overall (crime being more attractive economically to the less educated), not more of a downturn. Indeed, because persons who are criminally active in their mid-20s are a more deviant group than those charged in their late teens, we would expect the difference to be narrowed, not broadened, compared to a more general population sample.²² Moreover, the downturn occurs by the 1963 cohort, for which extended high school attendance should no longer be a factor because the arrests start to be counted at age 22.

As a final test of the proposition that increased involvement with drugs (both using and selling) might be lowering high school completion rates,²³ we compared, for each of the three years 1985 to 1987, the completion rate for a particular age group (for example, high school completion rates of 18-year-old arrestees in 1985, 1986, and 1987). If drug involvement has lowered commitment to education, we might expect to find that 18-year-olds charged in 1987 would have a lower high school completion rate than 18-year-olds charged in 1986 or 1985. We present the results in Fig. 3.4. These figures do not suggest a strong influence; in successive years, the younger cohorts show slight

²¹High school completion rates for black males nationally grew steadily over the period 1974–1985. The CPS data suggest that we should observe a difference of only 18 percent between the 1967 cohort and the 1962 cohort in 1985; we actually observed a difference of 37 percent. District differences might not be the same as those suggested by the national data if high school completion rates had changed over time by a different amount.

²²The PSA data include older cohort members only if they were charged in their late 20s. If they were charged in earlier years and either desisted from further offenses or were imprisoned during the period 1985–1987, they would not appear in this file.

²³Kleiman (personal communication) points out that at a time of concern with decreasing school quality, the test is two-sided. If schools are becoming poorer, we might expect to find successive age cohorts showing lower high school completion rates.



SOURCE: Pretrial Services Agency.

Fig. 3.4—Arrested offenders' high school completion rates, by age, 1985-1987

differences and the pattern is inconsistent. Some older cohorts (23 years of age and up) actually show the opposite pattern; persons of a specific age charged in 1987 are, on average, more educated than persons charged in earlier years.

We may simply be observing a change in the composition of the criminally active population in recent years, with a higher percentage of this population coming from persons who do not manage to complete high school. If crime has become more economically rewarding, as the growth of street drug markets suggests, the effect should be greatest for those whose legitimate earning opportunities are weakest—that is, for persons who do not complete high school. The more alarming possibility, which these data cannot address, is that drug use and selling have raised the dropout rates for the population of District black males as a whole.

Specialization

If drug dealing is so much more financially rewarding, then those who can distribute drugs may not continue in other criminal activities. Do persons charged with drug distribution show signs of specializing in distribution?

The PSA data permit assessment of specialization in two ways. The first allows us to consider the whole three-year career for which we can observe the data; the second allows us to take into account the sequence of charges.

For the first, we calculated the percentage of persons charged with more than one offense who, in the three-year period, were (1) charged with drug offenses only, (2) charged with nondrug offenses only, and (3) charged with some of both. We give the results in Table 3.10. Of persons with multiple charges, 40.4 percent were charged only with drug offenses; 27.3 percent had a drug charge and at least one other kind of charge. Alternatively, we can say that 40 percent of drug sellers with multiple charges were charged with a nondrug offense. Given that many criminal offenses do not result in a charge and that a substantial fraction of persons charged with multiple offenses spent some of the three-year period in prison, this is a minimal estimate of the percentage of drug sellers involved in other offenses. Those with three or more charges showed even less specialization.

One weakness of this approach to specialization is that it does not allow for sequential specialization. Some offenders may come to specialize in drug-selling only later in their criminal careers—for example,

Table 3.10

PERCENTAGE OF PERSONS WITH MULTIPLE CHARGES
SPECIALIZING IN DRUGS, 1985-1987

Group	Number of Charges		Total
	2	3+	
Only drug charges			
Frequency	1890	2337	4227
Column %	48.7	35.5	40.4
Some of both			
Frequency	304	2549	2853
Column %	7.8	38.7	27.3
No drug charges			
Frequency	1690	1695	3385
Column %	43.5	25.7	32.3
Total	3884	6581	10,465

SOURCE: Pretrial Services Agency.

NOTE: Data are for black male District residents aged 18-29.

they may become drug-sellers after they have been involved in property crimes. If the first drug-selling charge is taken as a marker for entry into drug selling, then we might ask what the probability is that an individual who has been charged with distribution will continue with other criminal activities.

Thus, we calculated the probabilities that an individual charged with a drug-sale offense will be subsequently charged with a nondrug felony²⁴ or drug-sale offense. The results again point to little specialization. Of those charged with drug selling, 26 percent were later charged with a nondrug felony within the three-year period. Only 28 percent had a later drug-selling charge within the same period. Knowing that the previous charge was a drug charge provided little information relevant to predicting whether the subsequent charge was a drug charge.

THE MISSING SELLERS

At this stage, it is important to reiterate some major limitations of the PSA data as a description of the drug-selling population in the District of Columbia. Not all drug sellers get arrested in the course of one year's (or three years') dealing activity, nor are all sellers equally at risk of getting arrested. Those who sell in highly visible and notorious markets are more at risk than those who sell in more discreet settings. Thus, our data are skewed toward individuals at the low end of the distribution system who operate in relatively exposed settings.²⁵ To assume that the poor or near poor among dealers are more likely to be found in these settings seems reasonable.

We cannot say what share of the market, either in terms of dollar volume or number of users, is serviced by persons with high exposure to arrest. Some segments of the retail market (particularly those servicing more affluent individuals) may involve transactions in private and protected settings; sellers associated with such transactions are less likely to be arrested. Without data from a sample of users on where they make their purchases, determining how much of the market is serviced by these sellers is impossible.

²⁴At this stage we dropped the nondrug misdemeanor category because it contained some offenses that were quite minor.

²⁵Police agencies, particularly federal agencies, are willing to spend more resources to arrest a high-level dealer than a low-level dealer. They will indeed let a low-level dealer trade (that is, be charged with a lesser offense) by informing against a higher-level dealer. In theory, high-level dealers might consequently be at higher risk than retailers. Given that our data come only from persons arrested by local police, and given the recent police emphasis on restoring order in areas with open street markets, to assume that lower-level dealers are at higher risk than their suppliers seems reasonable.

Thus, the PSA data form a skewed sample of the drug-retailing population. The total drug-selling population is likely less black, young, and ill-educated than the PSA data suggest.

On the other hand, not all sellers who are young, ill-educated, and black are charged with drug selling. Indeed, in the following section we report the results of a survey of probationers that includes a large number of persons who say they have sold drugs in the recent past (six months before entering probation) but whose criminal records and self-reports of arrests show no drug-selling charges (though the vast majority have been arrested on drug-possession charges). Persons who have no drug-selling record tend to report less time devoted to that activity. Thus, we may best view the PSA data on individuals charged with drug selling as providing data on those who are regular sellers in the more exposed sectors of the market.

CONCLUSIONS

This section's central finding is that drug selling involved a substantial percentage of the young, black, male population of the District of Columbia in the late 1980s. Many persons charged with this offense had not finished high school and were also charged with other offenses.

The high percentage is unlikely to come as a surprise to local residents, given the heavy attention the media have devoted to drug selling in the past few years. Nonetheless, the figures are disturbing. Approximately one in six black District males born in 1967 appears to have been charged with drug selling between the ages of 18 and 20. These estimates reflect only those who were caught by the police; the true numbers for this cohort involved in drug selling may actually be substantially larger. If we ignore such an undercount and take into account only data on age-specific arrest rates, we see that by age 29, the percentage of that cohort charged with drug selling will quite likely have risen to at least 25.

Drug selling appeared to be an increasingly important activity for the young in the mid-1980s. Persons entering adult life in the mid- to late 1980s were more involved with drug selling than their criminally active predecessors; fully two-thirds of the younger cohorts with a criminal charge between 1985 and 1987 had a drug charge. Moreover, there were hints that this led to fewer black males completing high school; certainly those who were charged with drug selling showed markedly lower high school completion rates than did those charged with other offenses.

These data support the hypothesis that drug markets are an important source of employment and income for young, poorly educated males. This fact may be reflected in poorer subsequent employment histories (resulting from incarceration). We now turn from analyzing who participates in drug selling to examining what income such participation yields.

IV. THE ECONOMIC LIFE OF STREET-LEVEL DRUG DEALERS

The PSA tape permits us to describe criminal careers and other characteristics of persons charged with drug-selling offenses in the District. It does not allow us to describe the economic returns to drug selling, and it provides limited information on the legitimate and criminal activities of the drug-selling population.

Such data are of particular importance given the widespread belief that drug dealing is an extremely profitable activity. Newspapers regularly report instances of young, poorly educated males earning many hundreds of dollars a day from participating in the retailing of drugs, particularly cocaine. Such returns are reportedly much higher than for other criminal activities.

Skepticism about the media stories is justifiable. Though the media may faithfully relate what reporters are told by their interviewees, the evidence is unsystematic, interviews are few in number, subjects are arbitrarily selected, and interviewers are likely to report the more sensational numbers.

Moreover, that such high returns can be earned by large numbers of persons whose alternative earnings (legal or criminal) are so low seems analytically implausible. Without drug sellers having the power to control prices and restrict entry—and few claim that such power exists at the retail level—competition might be expected to generate earnings that reflect the highest paid alternative (legal or illegal) and an adjustment for the peculiar risks incurred by drug sellers. Perhaps the risks are high enough to justify such large earnings. We will examine this issue in the final section—returns to risks, if they are an important contributing factor, can have important policy implications.

To develop more soundly based estimates of individual earnings from drug selling, we interviewed a sample of active drug dealers. These interviews covered a wide variety of topics: incomes yielded by drug dealing and other crimes in which drug dealers participate, household settings and expenditure patterns, and education and legitimate work activities. The data on expenditures and household settings are potentially important for determining what role earnings from drug dealing play in social mobility and family support. Education and work history provide insight into the extent to which drug selling is a complement to, or substitute for, legitimate economic activity.

With the assistance of the Adult Supervision Branch of the Social Services Division (or probation unit) of the District of Columbia

Superior Court, we were able to conduct personal interviews with 186 persons on probation who reported income from drug selling in the six months before entering probation. This section reports the results of our analysis of these interviews. The first subsection presents a summary of the major findings. Brief descriptions of how we collected the data and of the sample's characteristics follow (additional details appear in Apps. B and C). The fourth subsection presents detailed analysis of the data, covering the kinds of drugs sold, expenses incurred, selling frequency, estimates of criminal income in relation to legitimate income, relationship between illicit income and spending patterns, and relationship between drug consumption and drug selling. The final subsection contains our conclusions about drug dealing as a career.

MAJOR FINDINGS

The survey's central finding is that drug dealing is indeed a very highly paid activity for a set of persons who have modest legitimate economic alternatives. For persons who reported selling drugs on a daily basis, we estimate median gross earnings of some \$3600 per month; our less reliable estimate of net income is \$2000 per month, to which must be added substantial "in-kind" income (that is, drugs). However, most of the sample sold drugs on only an occasional basis. As a result, the median net earnings from drug sales for our complete sample were only \$721 per month. This figure compares with median monthly earnings of \$800 from legitimate employment for the 75 percent who reported such earnings. Nearly one-fourth of the sample sold drugs no more than one day per week; these persons reported monthly net drug earnings of only \$50 per month.

For this sample, drug dealing generated much greater income than did other income-generating crime. Though many persons in the sample had committed many other crimes, they had low rates of self-reported involvement in those crimes during the six-month period we examined.

Most sample members reported current employment; the median income from all legitimate sources was some \$850 per month.¹ Earnings from drug selling were positively correlated (though weakly) with

¹Note that we cannot use these data to examine the causal relationship between drug dealing and legitimate employment. The sample's high unemployment rate may represent its members' low commitment to legitimate work because of their success in the drug business. On the other hand, the unemployment rate in this sample is not very much higher than that of a group with similar educational and sociodemographic characteristics (see the discussion in Sec. I).

legitimate earnings. Drug selling seemed to be a complement to, rather than a substitute for, legitimate employment.

The young sample (median age 27) contributed little to their own household's expenses; a fourth, for example, made no payments for housing. However, approximately half reported contributing to the financial support of someone outside their household. More than half reported purchasing drugs for their own consumption. Median expenditure on drugs was \$400 per month, in addition to any withholding of drugs from business for personal consumption (41 percent of respondents reported so doing). Higher drug-selling income was associated with higher personal expenditures on drugs and on living expenses; we also found indications of considerable gift giving by active sellers.

DATA COLLECTION²

We sought a sample of persons who had current or recent involvement in the drug trade. We explored several possible sampling frames, including drug-treatment programs, prisons, and general population surveys in high-risk neighborhoods; we abandoned these either as presenting very skewed populations (for example, persons in drug treatment are older than the drug-dealing population and are probably more involved with heroin) or as posing a high risk to interviewers and being costly (finding dealers in the general population).

We finally decided to approach the Social Services Division of the District of Columbia Superior Court; this division administers probation programs. From previous work we knew that large numbers of drug dealers were sentenced to terms of supervised probation.³ The setting of probation presented fewer problems for conducting personal interviews; the complexity of the information we sought made carrying out the interviews with a written questionnaire infeasible, particularly given a relatively poorly educated set of respondents.

We recruited the field staff from experienced interviewers in the Washington area; all were black and all but one were female. Interviewers initially approached potential respondents to obtain a screening interview, the purpose of which was to establish whether the

²A more complete description of the data collection procedures and experiences appears in App. B.

³Probation was the most frequent outcome for drug-trafficking convictions nationally in the mid-1980s. Cunniff (1986, p. 3) reports probation imposed at sentencing for 70 percent of drug trafficking convictions. This was more frequent than larceny (55 percent), burglary (45 percent), robbery (29 percent), rape (28 percent), or homicide (14 percent); overall, 46 percent of felony convictions resulted in probation. Recent increases in sentence severity for drug offenders may have changed that pattern.

individual had earned money from selling drugs (broadly defined) in the six months before probation. Self-reported drug selling rather than a recent conviction for drug distribution determined eligibility, along with demographic requirements (age 18–40, male, resident in the District of Columbia). The field staff approached a total of 524 persons; this number resulted in 186 completed interviews (we analyze the sources of attrition in App. B). Respondents received \$15 for completing the interview.

The interviews averaged approximately one hour in length. Most interviewers rated the respondents as attempting to provide valid information. Only 2 percent were rated as low in honesty; another 9 percent were reported as finding the interview confusing. Given the nature of this population, a few less-standard ratings are worth reporting: 4 percent seemed drugged, 1 percent had withdrawal symptoms, and 8 percent seemed drunk. These figures are not cumulative; some persons exhibited more than one symptom.

Naturally, we were concerned about problems of selection bias and the reliability and validity of responses. Appendix C contains our examination of these issues, but we can briefly summarize our conclusions here. First, our survey sample matches the PSA drug-dealing subsample (described in the previous section) quite closely with regard to age, race, and employment, but our respondents tended to be somewhat better educated. Second, within our sample of self-identified drug dealers, respondents who had never been arrested for a drug offense did not differ in their demographic characteristics, drug-dealing frequency, or drug-dealing income from those who had been arrested for a drug offense, although our survey may not generalize to dealers who completely evade the criminal justice system. Third, self-reported arrest and conviction histories were generally accurate and often more extensive than probation unit records, although some discrepancies that appeared to result from definitional differences existed (for example, what constituted “intent to distribute”). Finally, although we could not validate respondents’ self-reports of illicit income, we were able to conduct some internal consistency checks; the results of these tests were mixed. Although some indications of internal consistency were evident, there were also some inconsistencies. We present what we consider the most accurate estimates in this section’s text, but with the caveat that we consider these estimates somewhat imprecise and uncertain. Nevertheless, we believe that our survey provides the best available data describing the economic life of street-level drug dealers in Washington, D.C.

SAMPLE CHARACTERISTICS

All our respondents conformed to the sampling criteria: male residents of Washington, D.C., between the ages of 18 and 40 who were currently on probation and had obtained income from selling drugs in the six months before entering probation. Most (71 percent) of our respondents reported that they had always lived in the District; another 16 percent had lived there a decade or more, and only 5 percent for less than two years. The mean and median ages were 27 years. Probationary sentences ranged from 5 to 60 months, although most (61 percent) were for 12 months or less; the majority of offenders (76 percent) were on probation for a drug offense, although this was not a sampling criterion. Our sample was 97 percent black and 3 percent white.

Our survey questions focused primarily on the 6-month period before the onset of probation, which we refer to as the "target period." We chose this time period because we expected it to be wide enough to capture a significant amount of criminal activity, yet recent enough to minimize recall problems. We interviewed the majority of our respondents (75 percent) at the onset of their probationary period. The remaining respondents were interviewed between 1 and 12 months after the onset of probation, with a median delay of some 2 months. Although this delay may have influenced respondents' recall of events during the target period, we were unable to detect significant relationships between the length of time from the target period to the interview and any of the major survey responses we report in this section.

Some 83 percent of our sample had spent time in jail during the target period—typically once, but two or more times for 15 percent of this sample segment. Among those who had spent time in jail, the typical stay was for approximately three days, although 28 percent spent less than a day and 27 percent spent more than a month in jail, usually for pretrial detention. We might expect time in jail to reduce respondents' "time at risk" of criminal activity during the target period, but we found little effect of this factor in our analyses. Not surprisingly, those who spent time in jail had slightly fewer living expenses during the target period ($r = -.17$, $p < .05$) and the amount of time spent in jail was significantly related to the number of arrests ($r = .19$, $p < .05$), but otherwise time in jail appeared to have no significant effect on the income and activity measures we present in the remainder of this section.

Respondents' Household Characteristics

Respondents' household characteristics appear in Table 4.1. Almost all our respondents were single, and most had never been married; as one might expect, those over the age of 30 were more likely to be married or divorced. Although most respondents were single, only some 6 percent reported that they lived alone. On average, respondents reported living with three to four other people. Overall, 30 percent of the respondents characterized themselves as heads of their households,

Table 4.1

HOUSEHOLD CHARACTERISTICS (Percent)

Characteristic	Age Category			Full Sample (186)
	18-24 (69)	25-30 (53)	31-40 (64)	
Marital status:^a				
Legally married	1	2	19	8
Separated/divorced	0	15	28	14
Living as married	4	11	11	9
Never been married	94	72	42	70
Residence:				
Private house	59	51	45	52
Apartment building	32	34	42	36
Housing project	6	8	6	6
Rooming/boarding house	1	4	8	3
Halfway house/shelter	1	4	0	2
No regular place	0	0	2	1
Cohabitants:				
Lives alone	3	15	3	6
One cohabitant	16	13	22	17
2-4 cohabitants	58	55	54	56
5 or more cohabitants	23	17	21	21
Head of household:^a				
Respondent	10	34	48	30
Father	25	21	14	20
Mother	35	17	16	23
Other	30	28	22	27

NOTES: Number of respondents appears in parentheses beneath each age category. Percentages may not add to 100 because of rounding.

^aStatistically significant association with age category, $p < .05$.

but most (especially those under 30) named parents or other relatives. Some 79 percent said they contributed to the household expenses, including rent, utilities, and food. On average, respondents who lived alone reported paying approximately \$554 a month in household expenses (rent, utilities, and food), whereas those who lived with others averaged some \$332. Approximately half reported that other people—children, spouses, girlfriends, or family members—depended on them for financial support. These dependents often resided in a different household. We will present additional data on respondents' expenses below.

That we do not have a homeless or transient sample is clear. More than half our sample (52 percent) reported living in a private house; 39 percent lived in an apartment building or rooming or boarding house; fewer than 10 percent reported living in a housing project or a halfway house or shelter; only a single respondent said he lived in "no regular place." Respondents had lived at their current residence an average of eight years, with a median of four years. Given the respondents' relative youth, this long tenure at their current residence (along with the high percentage of "never marrieds") suggests that this population is still strongly tied to the nuclear family.⁴

Education and Employment History

As we mentioned previously, approximately two-thirds of the sample reported having received at least a high school diploma or an equivalent degree. As we see in Table 4.2, persons in the 18–24 age category were significantly less likely to have completed high school. This finding reflects the low completion rates for 18- and 19-year-olds, 62 percent of whom had not completed high school. As we discussed in Sec. III, a substantial percentage of black male high school graduates do not attain this status until after the age of 19. Thus, we examined the number currently enrolled in educational programs.

Overall, 21 respondents (11 percent) reported that they were currently enrolled in some form of educational program, either high school (5 respondents), college (6 respondents), graduate school (1 respondent), business or vocational school (7 respondents), or technical institute (3 respondents).⁵ Of these 21 respondents, 15 had already completed high school. Although the 18–24 age group was significantly

⁴However, we should note the possibility, suggested by our interviewers, that many respondents may actually spend very little time living at the homes that they described to us.

⁵These numbers sum to 22 because one respondent reported both college and vocational school course work.

Table 4.2
EDUCATION AND EMPLOYMENT HISTORY
(Percent)

Characteristic	Age Category			Full Sample (186)
	18-24 (69)	25-30 (53)	31-40 (64)	
Education:^a				
Hadn't completed HS	43	28	25	33
HS diploma/GED	54	61	65	60
Associate degree	3	2	8	5
Bachelor's degree	0	8	2	3
Employment:^a				
Currently enrolled in school/job training ^a	19	8	6	11
Legitimately employed	59	74	62	64
Median hourly wage (\$) ^a	5.00	6.00	8.00	7.00
If unemployed, ever held legitimate job	89	100	100	95
Occupation:^a				
Unskilled labor	18	18	13	16
Semiskilled labor	3	12	6	7
Skilled labor	20	37	49	35
Sales/service	54	27	30	38
Other	5	6	2	4

NOTE: Number of respondents appears in parentheses beneath each age category.

^aStatistically significant association with age category, $p < .05$.

more likely to be currently enrolled in an educational program, this does not account for the lack of high school graduates in that group. In fact, only 5 (18 percent) of the 28 persons aged 18-24 who had not finished high school were currently enrolled in any form of educational program. The remaining 23 appear to be true high school dropouts, though we cannot preclude the possibility that some of these people will return to school still later.

Overall, 64 percent of the sample members were currently employed at a legitimate job, and 60 percent reported working five or more days

a week.⁶ The typical reported hourly wage among currently employed respondents was seven dollars.⁷ Most employed respondents described their occupations in terms classifiable as either skilled labor or sales and service; persons aged 31–40 were more likely to report the former, while those aged 18–24 were more likely to report the latter. The hourly wage rates and occupational categories suggest a population that is doing relatively well in the labor force given its educational attainments.

Criminal Histories

Table 4.3 presents respondents' self-reported arrest and conviction histories. We asked respondents to list any arrests or convictions for

Table 4.3

SELF-REPORTED ARREST AND CONVICTION HISTORY

Type of Offense	Arrests				Convictions		
	Ever (%)	In Target Period (%)	Mean Number of Arrests	Mean Age 1st Time	Ever? (%)	Mean Number of Convs.	Current Probt. (%)
Drug crime	84	70	1.6	24.2	77	1.2	76
Possession	68	56	1.2	24.0	62	0.9	53
Sale/manuf.	27	19	0.4	25.0	23	0.3	30
Nondrug crime	64	32	2.6	20.3	50	1.4	27
Violent	27	6	0.5	21.7	17	0.3	5
Property	44	17	1.3	20.4	31	0.7	14
Other	36	13	0.8	22.2	20	0.4	8

⁶These data concern employment status at time of interview rather than during the target period. Because the probation unit requires that its clients have a job, the figures we report here may be somewhat higher than they would be if we were to obtain information on employment status before probation. Note, however, that most respondents came directly from sentencing and had not yet entered the probation program at the time of interview. Although respondents we interviewed at intake were somewhat less likely to be employed (62 percent) than respondents interviewed later in the probationary period (72 percent), this difference was not statistically significant (chi-square [1] = 1.47, $p > .20$).

⁷Cunniff (1986, p. 18) reports a mean full-time hourly wage of \$6.42 for a national sample of probationers in 1983–1985. Note that within our survey, the correlation between hourly wage and legitimate job income (reported later in the section) was only .24, which seems low. Because we had to estimate hourly wages for the 40 percent of the sample members who reported wages in other than hourly units, the measure of total monthly legitimate wages is likely more valid.

more than 20 different criminal offenses; we combined these offenses into two major categories—drug crime and nondrug crime. We further categorized drug crimes as possession and/or sale and manufacture; these two categories were not mutually exclusive. We categorized nondrug crimes as violent crimes (including robbery, homicide, assault, rape, and kidnapping), property crimes (burglary, fraud, fencing, larceny, vandalism, and so on), and other nondrug crimes (gambling, pimping, vagrancy, drunk and disorderly conduct, and so forth).⁸

Given that we included only probationers who admitted to earning income from illicit drugs during the target period, that our respondents were more likely to have been arrested and convicted of drug offenses than nondrug offenses is not surprising. However, many respondents had a history of nondrug crimes, particularly property crimes. One-third reported a nondrug arrest in the target period, but only 6 percent reported arrest for a violent crime in that same time. The first drug arrest occurred at a relatively late age: 24 for drug possession and 25 for drug selling, compared to approximately 20 for nondrug offenses. This finding is consistent with the hypothesis that drug offenses have become of increasing importance in recent years.

We also obtained self-report data on whether the individual had participated in particular kinds of offenses during the target period. Table 4.4 contains these data. Note that the data are based on a different list of offenses from those we used for Table 4.3; therefore, these commission rates are not directly comparable to the arrest and conviction rates in Table 4.3. The data's striking feature is the very low rate of involvement in violent crime during the target period; only 2 percent of the sample reported such activity, though 27 percent reported some previous arrest for a violent offense. On the other hand, one in five respondents reported committing a violent crime at some time in the past, and half reported a history of property crime.

Because all respondents committed drug offenses during the target period, we cannot examine the relationship between the commission of drug and nondrug offenses.⁹ However, we can test a weak hypothesis that the commission of nondrug offenses is related to the frequency of

⁸As we describe in App. C, we found that respondents' self-reported criminal histories were generally consistent with the probation unit's records.

⁹A more appropriate methodology for assessing the relationship between drug and nondrug crime might include a demographically matched comparison sample of probationers who did not commit drug offenses in the target period to see if they were more or less likely to commit nondrug offenses than our sample of dealers.

Table 4.4

PROBATIONERS REPORTING NONDRUG
OFFENSES DURING TARGET PERIOD
(Percent)

Type of Offense	Ever Committed	Committed during Target Period
Any nondrug offense	58	33
Violent	22	2
Property	54	31
Other	13	6

drug selling. This relationship was nonsignificant for all nondrug crime;¹⁰ no hint of an association appears here.

DRUG-SELLING ACTIVITY

Of course, our sample's most interesting aspect is that each of these men acknowledged having earned income from the distribution of illicit drugs during the target period. As we see in Table 4.5, cocaine and crack were the most frequent sources of income.¹¹ Some 79 percent of the respondents earned income from selling either crack (25 percent) or cocaine (34 percent) or both (20 percent); 30 percent had earned income from PCP sales, 20 percent from heroin, and 18 percent from marijuana. Only a few respondents reported earning income from the distribution of methadone or other drugs. The mean number of different drugs generating income for respondents was 1.7; 55 percent of the sample reported selling only a single drug.

We asked each respondent who reported earning income from a drug how much he usually received each week he worked at making, moving,

¹⁰Chi-square (2) < 1, nonsignificant; phi correlation = .04. We also calculated the same statistics for subgroups of nondrug crimes: for violent crime (chi-square [2] < 1, nonsignificant; phi correlation = .04), for property crime (chi-square [2] < 1, nonsignificant; phi correlation = .07), or for other nondrug offenses (chi-square [2] = 1.09, nonsignificant; phi correlation = .08).

¹¹In the remainder of this section, we will distinguish crack from other forms of cocaine. Although crack is a derivative of cocaine, we attempted to treat it as a distinct drug in the interview because of its special psychological, physiological, and economic characteristics. In general, most respondents appeared to recognize the distinction; a few respondents who initially said they had sold cocaine, but not crack, later (in subsequent interview items), after hearing the interviewer refer to the distinction, said they had sold crack. Nevertheless, some overlap between responses with regard to these categories may have occurred.

Table 4.5

DRUGS GENERATING INCOME FOR RESPONDENTS,
SIX-MONTH PERIOD BEFORE PROBATION

Drug	Generated Income ^a (%)	Major Source of Drug Income ^b (%)	Median Weekly Income ^c (\$)
Crack	45	34	700
Cocaine	54	32	500
PCP	30	16	600
Marijuana	18	9	310
Heroin	20	9	500
Methadone	1	0	83
Other	2	0	200

^aCategories were not mutually exclusive.

^bCategories were mutually exclusive.

^cGross income during each week of making, moving, or selling each drug, among persons earning income from each drug.

or selling that drug. The median estimate of gross earnings per drug appears in Table 4.5, along with the percentage of respondents for whom each drug is the most profitable. A close correspondence exists between the percentage of respondents engaged in the distribution of a drug and the median income that drug generates.¹² This finding suggests that more sellers were engaged in the distribution of drugs that yielded higher earnings. Note that the risks associated with drug selling (whether from other participants or from law enforcement) may vary among drugs. Differential earnings may reflect those differential risks; the higher earnings associated with crack do not necessarily make it the most attractive drug to sell. Note too that these income estimates only represent earnings during active weeks of drug distribution and thus exaggerate the amount of total drug income respondents earned during the target period. Later in the section we will present more refined estimates of total drug earnings per respondent.

We asked respondents to describe how frequently they participated in drug-selling activity using a five-option response scale ranging from "every day or almost every day" to "one day a week or less frequently." To simplify our presentation, we have collapsed the three middle

¹²Spearman rank-correlation coefficient = .85.

options into one level: "several days a week." As we see at the top of Table 4.6, little difference across drug specialties in the frequency of sales activity occurred—most respondents reported selling drugs on a weekly basis, usually more than once per week. Marijuana differed from the other drugs in the low percentage of persons reporting full-time sales activities.¹³

To learn more about the activities involved in the street-level drug markets, we asked respondents several detailed questions about the last day they actively participated in the distribution of their most profitable drug.¹⁴ We summarize their responses in Table 4.6. The typical respondent spent only three hours participating in drug-distribution activities, suggesting again that this was not a full-time activity for most respondents.¹⁵ Marijuana distribution appears particularly casual, with a median of a single hour per day, consistent with the fact that relatively few sellers reported daily selling of that drug. Respondents typically reported some 13 sales per day across all drugs—a rate of approximately 4 sales per hour.¹⁶ In general, sellers made 1 sale per customer, although cocaine and heroin customers were somewhat more likely to return twice in the same day.¹⁷

Most respondents did not manufacture the drugs they distributed; they were most likely to have manufactured PCP and least likely to have manufactured heroin. Approximately half reported keeping some of the drugs they were distributing for their own consumption,

¹³ Respondents reporting earnings from marijuana sales were less specialized than were other respondents. They sold a greater variety of drugs in the target period (mean = 2.35 drugs, median = 2) than did nonmarijuana dealers (mean = 1.55 drugs, median = 1); $t(183) = 4.30, p < .0001$. Marijuana may be sold as a complementary product. Because most people who use other drugs also use marijuana, sellers who provide marijuana along with the other drug may have an advantage over sellers who sell only the one drug.

¹⁴ To avoid obtaining detail on an atypical day, we specifically asked most respondents to exclude the day they were arrested. We did not adopt this procedure until after we had completed a small number of interviews.

¹⁵ Analysis of "hours spent selling," "number of different customers," and "sales per day" failed to yield any significant differences among respondents classified by frequency of selling. In other words, heavy sellers did not report selling for longer hours or to more customers on the last day of selling. Frequent sellers simply sell on more days.

¹⁶ We asked respondents detailed questions about these transactions—the amounts they sold, the prices they charged, and their wholesale costs for the drugs they sold. These data were extremely complex, were highly idiosyncratic, and did not lend themselves to simple statistical summaries. For example, respondents described drug transactions in terms of a variety of measurement units—ounces, pounds, grams, kilos, pills, vials, bags, rocks, and so forth—and transforming these units to a common metric, even within a single type of drug, is difficult. We hope to conduct a more detailed analysis of these data in the future.

¹⁷ The relatively large number of repeat customers for heroin is consistent with the heroin-using population's consisting mostly of addicts who are unable to accumulate money for regular purchases of more than one dose at a time.

Table 4.6
SALES ACTIVITY, BY MAJOR DRUG

Characteristic	Drug Sold					
	All	Crack	Cocaine	PCP	Marij.	Heroin
Participation frequency (%):						
Daily	37	41	39	37	21	38
Several days/wk.	40	39	41	37	43	31
1 day/wk. or less	23	20	20	27	36	31
Median hours spent selling ^a	3	4	4	3	1	4
Median # sales ^a	13	16	15	10	4	14
Median # customers ^a	12	15	12	11	3	10
Manufacturers (%)	12	11	12	23	0	0
Kept drug for self (%):						
Half or more	11	11	12	13	6	6
Less than half	30	28	21	23	50	63
Hire or hired (%):						
Work alone	48	46	45	57	75	25
Hired others	22	21	21	27	19	19
Middleman (both)	8	11	10	0	0	19
Hired by others	22	21	24	17	6	38
Number per column	182	61	59	30	16	16

^aOn last day of selling.

although usually only "a little of it." More than half the heroin and marijuana dealers kept some drugs for their own use, while only about a third of the crack, cocaine, and PCP dealers did so. Note that marijuana and heroin sellers appear to differ somewhat from persons selling other drugs: A higher percentage retain some of the drug, but a smaller share of these retain as much as half. In the case of marijuana, this finding may reflect the ubiquitousness of use of that drug (most sellers retain some); because the markup for retailers is relatively small, however, they cannot afford to retain a high percentage of the drug. Very few nonusers market heroin for reasons we suggested in Sec. II; this finding explains the high percentage reporting retaining some of the drug, but why so few retain half is less clear. Additional data on respondents' personal drug consumption appear later in this section.

We asked respondents whether or not they were hired by others to help distribute drugs, and whether or not they themselves hired others to assist them. We found some overlap in responses to these questions and created a four-level classification that captures (approximately) the organizational structure of our respondents' drug-dealing operations. Considerable variation across drugs occurred. Almost half the respondents reported that they worked alone. This was most common among marijuana dealers, as one might expect given the small amount of capital necessary to operate in the retail end of that market.¹⁸ Crack, cocaine, and PCP dealers who worked with others were as likely to be hired by them as to have hired them, but more than half the heroin dealers were hired by others; one-third of these were "middlemen" in a chain of command.

Table 4.7 documents our expected finding that frequency of drug-selling activity is positively associated with risk of arrest and conviction on drug-related charges. In general, persons who deal more than one day a week are at greater risk, although the relationships are not strong, nor are they statistically significant when drug charges are broken down into separate "use/possession" and "sales/manufacture" categories. Of course, our sample consists only of dealers who have been convicted—usually (but not always) on drug-related charges. Because the sample excludes dealers who are able to evade arrest and prosecution completely, it is not well suited for exploring possible predictors of risk.¹⁹

LEGAL AND ILLEGAL SOURCES OF INCOME

As we will document in Sec. VI, selling illicit drugs in urban street markets is a very risky business. Why would anyone endure such risks? One popular hypothesis, which is intuitively plausible, is that individuals are attracted to street dealing as a means of compensating for inadequate opportunities for legitimate employment. As we noted above (fn. 1, p. 52), our probationer-dealer survey was not designed to test the causal relationship between legitimate employment and criminal activity. However, our survey data are inconsistent with an extreme hypothesis that individuals are driven to street dealing by sheer economic necessity—by an inability to secure a minimally adequate level of income through legitimate means. As Table 4.8 shows,

¹⁸The interview question that asked about working for others was not sufficiently precise to categorize consistently those who were selling on commission as opposed to being salaried agents.

¹⁹We discuss this issue in App. C.

Table 4.7

**ARREST AND CONVICTION FOR DRUG OFFENSES,
BY FREQUENCY OF DRUG SELLING
(Percent)**

Event	Daily	Several Days/Week	1 Day/Week or Less
Ever arrested ^a	88	87	71
Use/possession	70	72	56
Sale/manufacture	31	25	22
Arrested in 6 months before probation ^b	75	75	56
Use/possession	57	63	44
Sale/manufacture	24	18	12
Ever convicted ^b	79	80	63
Use/possession	61	69	49
Sale/manufacture	27	20	20
Current probation ^b	78	82	63
Use/possession	52	54	49
Sale/manufacture	33	32	17
All respondents	37	40	23

NOTES: Arrest and probation data from self-reports. Sample size for daily drug selling was 67; for several days per week, 71; for one day per week or less, 41.

^ap < .05.

^bp < .10.

82 percent of our respondents reported receiving some form of legitimate income during the target period.²⁰ Total legitimate income, averaged across all respondents, was some \$850 per month; the vast bulk of this came from a legitimate job or business. Legitimate earnings for these respondents represent approximately 133 to 150 percent of the poverty line.²¹ Across respondents, the major source of legitimate

²⁰These income data were skewed by some extremely high outliers. We were unable to validate these responses and cannot be certain that they are not valid, but they distort the aggregate statistics. Rather than dropping the extreme cases, we opted to "Winsorize" the distribution, replacing the three most extreme values by the fourth most extreme value. This method has the virtue of representing these cases as extremes, but attenuating their effect on the moments of the distribution (see, for example, Winer [1971]).

²¹The lower estimate is for respondents who did not support dependents; they reported mean total legitimate income of \$668 per month—133 percent of the 1988 poverty line for individuals without dependents, or \$6024 per year. The higher estimate is for respondents who did support dependents; they reported mean total legitimate earnings of \$1021 per month—150 percent of the 1988 poverty line for single parents under 65 with one dependent child, or \$8154 per year (see Bureau of the Census, 1989b).

Table 4.8

MONTHLY LEGITIMATE INCOME

Source	Percent Reporting	Where Reported:		Mean across Full Sample ^a (\$)
		Median (\$)	Mean (\$)	
Legitimate job or business	75	800	1046	790
Spouse, family, or close friends	10	100	218	22
Other legitimate sources	11	330	414	45
Total legitimate income	82	800	1038	849

^aIncluding zero values.

income came from legitimate jobs or businesses, as opposed to transfer payments from family or social programs. The percentage reporting earned legitimate income (75) is somewhat higher than our previously reported 64 percent employment rate, because 11 percent who were not currently employed reported income from a job they had held earlier in the target period. The mean reported earnings per month of those who were employed is well above the minimum wage level for a 40-hour week, though lower than we would expect from full-time work at the hourly earnings we reported earlier in this section. The second single largest source of legitimate income came from spouses, family, and friends. Other legitimate sources included Supplementary Security income, welfare programs such as food stamps and Medicaid, and Social Security benefits. Each of these was relatively rare.

To assess illegal income, we asked respondents to estimate the amount of money they had earned during the target period as a result of various different illegal activities. Ten of these activities involved nondrug-related crimes;²² the remainder involved drug sales ("manufacturing drugs," "selling drugs for yourself and/or others," "carrying drugs between a buyer and a seller, finding customers for a seller, directing a customer to a seller," and "other activities that help to

²²Specifically, robbery, holdups, or stickups; burglary or breaking and entering; cashing stolen checks or credit cards; con games, fraud, or swindles; embezzlement; selling or fencing stolen property; shoplifting, stealing from cars or trucks; gambling operations; pimping; and illegal sale of alcohol.

make, move, and sell drugs for yourself and others"). We combined these into two subtotals: nondrug criminal income and gross income from drug-selling activity (see Table 4.9). Because these incomes were reported for a six-month period, we have divided them by six to place them on a more convenient monthly metric.²³

In addition to gross drug income, Table 4.9 also contains our estimates of net drug income, which we derived by subtracting from gross earnings respondents' self-reported drug-business expenses (which we present later in Table 4.12).²⁴ For almost half the respondents (46 percent), gross and net income were the same; these respondents reported

Table 4.9
MONTHLY INCOME
(Dollars)

Source	Percentile			Mean	Standard Deviation
	25th	50th	75th		
Nondrug criminal income	0	0	50	215	702
Gross income from drug-selling activity	300	1333	3733	3558	5901
Net income from drug-selling activity ^a	25	721	2500	1799	5299
Total criminal income	33	833	2617	2015	5363
Total legal income	237	715	1000	849	1060
Total income (legal and illegal sources)	836	1647	3830	2863	5733

^aGross drug-selling income minus total drug-business expenses (see Table 4.12 below).

²³As with the legitimate income in Table 4.8, the entries in Table 4.9 are based on a Winsorized distribution ($g = 3$). We included zero-income values in the computation of all statistics reported in the table.

²⁴An estimate of net drug earnings is desirable, but we have some concerns about this measure's validity, for three reasons. First, "total drug-business expense" is the sum of seven different categories of expenses; each was probably fairly "noisy" and we are concerned that cumulated errors might be large. Second, the categorization of expenses as being "drug-business related" is somewhat ambiguous; for example, how should the respondent classify gifts to friends with whom he is also in business? Third, as we describe below, the net income measure was less reliably associated than the gross income measure with several variables with which it should have been associated (for example, living expenses).

no business expenses. This finding is what we might expect for persons who work as commission agents for others.

In addition to mean values, Table 4.9 shows the 25th, 50th, and 75th percentiles. The 50th percentile is, of course, the median—by definition, 50 percent of our respondents reported a value below the median; 50 percent, above. We can think of the 25th and 75th percentiles as the medians for the bottom and top halves of the distribution, respectively. Thus, we estimate that the typical respondent grossed some \$1300 a month from drug selling during the target period; the typical small earner, some \$300; the typical large earner, some \$3700. Of course, the estimated net earnings are more modest: some \$700 per month for the typical dealer in our sample, \$25 for the typical small earner, and \$2500 for the typical large earner. Because the income data are skewed, the mean estimates are inflated and are less descriptive of the typical dealer's income.

The striking feature of Table 4.9 is that drug-selling income is so much greater than earnings either from other crimes or from legitimate sources (though we must remember that the sample is one of self-admitted drug dealers). But for this population, of whom approximately one-third (see Table 4.4) reported involvement in nondrug income-generating crime, drug-crime earnings were more than an order of magnitude greater than earnings from other crimes when the respondents reported participation in such crimes. Mean drug earnings were also twice as large as legitimate earnings for those with income from a legitimate job or business. The total income, taking into account all sources, was very substantial, with a median of \$1647 per month. The mean income was about twice as high at \$2863; persons who succeed in drug selling make very large incomes indeed, particularly when we take into account their income from all sources.

We can use the reported number of hours per day along with the monthly earnings to estimate sellers' hourly earnings. If we assume that those who sold daily operate 22 days per month and sell for 3 hours per day (the median we report in Table 4.6), then the typical (median) number of hours per month is 66. With median net earnings of \$2000 per month for daily sellers, we arrive at an hourly wage of some \$30—approximately four times the sample median hourly wage from legitimate employment. Note that this calculation of hours does not make allowance for other time necessary for the selling activity, such as that required to obtain the drugs for sale or to do any packaging. Also, although sellers averaged \$30 an hour during the hours they actually spent selling drugs, they would probably average far less per hour selling on a full-time, 40-hour-a-week basis, for reasons we discuss at the end of this section.

EFFECTS OF OTHER VARIABLES ON DRUG INCOME

We were able to identify several variables that were significantly associated with drug-related income. These variables appear in Table 4.10. As one might expect, a major predictor of drug income was the frequency of drug selling, with the typical daily dealer earning some 12 times as much as respondents who dealt drugs one day a week or less. Monthly drug income was also related to the major source of drug income, with crack and heroin dealers earning the most, followed by cocaine dealers, PCP dealers, and marijuana dealers.²⁵ Respondents who hired others earned the most (especially the middlemen who were part of a larger chain of command), followed by those who were hired by others; those who worked alone earned the least. This finding may reflect the frequency of selling: Overall, those who hired others sold drugs more frequently than those who didn't (chi-square [2] = 7.42, $p < .05$). Persons who also committed nondrug felonies earned more selling drugs than those who didn't; however, these two groups did not differ in their frequency of drug selling (chi-square [2] < 1).

One final correlate does not appear in Table 4.10: monthly drug income, which had a reliable positive relationship with net monthly legitimate income ($r[186] = .27$, $p < .001$). We may account for this finding by speculating that those who hustle in their criminal activities also show similar energy in their legitimate jobs; we lack sufficient detail on level of effort in different activities to test alternative explanations of this correlation. Several other respondent characteristics were unrelated to drug income, including age, employment status, education, and personal drug consumption (see Table 4.11).

In sum, persons who sold drugs frequently earned much more than those whose participation was occasional; the latter group earned quite modest amounts, even if the returns per hour were high. Persons who were active in other crimes also tended to do better in drug selling, suggesting that they are more committed to criminal activity in general. High earnings from drug dealing seemed to be associated with entrepreneurship and general hustle in legitimate work and nondrug crime. We were unable to find strong predictors of drug earnings in respondents' demographic characteristics.

²⁵Because many respondents dealt more than one drug, we also regressed total drug income in log dollars onto a series of dummy variables indicating whether or not a respondent had earned any money from each drug. This analysis indicated that crack was the strongest predictor (standardized regression coefficient = .31, $p < .0001$), followed by cocaine (.23, $p < .005$), heroin (.16, $p < .05$), and PCP (.15, $p < .05$); the coefficients for methadone, marijuana, and other drugs were not significant.

Table 4.10

DEALER CHARACTERISTICS ASSOCIATED WITH MONTHLY
DRUG INCOME

Dealer Characteristic	Sample Size	Percent	Gross		Net	
			Mean (\$)	Median (\$)	Mean (\$)	Median (\$)
Selling frequency:						
Daily	67	37	6826	3600	3601	2000
Several days/wk.	71	40	2511	1333	1197	833
1 day/wk. or less (Stat. signif.)	41 (a)	23 (a)	564 (b)	300 (b)	156 (b)	50 (b)
Major drug sold:						
Crack	61	34	4640	2000	1849	833
Cocaine	59	32	3661	1333	1768	833
PCP	30	17	2808	825	1945	604
Marijuana	16	9	903	217	549	167
Heroin (Stat. signif.)	16 (a)	9 (a)	2559 (c)	2000 (d)	2219 (d)	1858 (e)
Hire or hired:						
Hired by others	40	22	2806	1550	1473	1000
Work alone	89	48	2587	833	1516	450
Middleman (both)	16	9	5777	2733	2908	1673
Hired others (Stat. signif.)	40 (a)	22 (a)	5599 (d)	2133 (b)	2281 (d)	750 (e)
Committed nondrug felonies during target period:						
No	125	67	3474	1015	1860	500
Yes (Stat. signif.)	61 (a)	33 (a)	3732 (e)	2000 (f)	1677 (e)	950 (f)

NOTES: Entries based on Winsorized distribution ($g = 3$). Statistical significance levels in mean and median columns based on analyses of variance of log-transformed dollars and nonparametric median tests, respectively, with $.10 < p < .05$.

^aNot applicable.

^b $p < .001$.

^c $p < .05$.

^d $p < .01$.

^eNot significant.

^fMarginally significant.

Table 4.11
DEALER CHARACTERISTICS NOT ASSOCIATED WITH
MONTHLY DRUG INCOME

Dealer Characteristic	Sample Size	Percent	Gross		Net	
			Mean (\$)	Median (\$)	Mean (\$)	Median (\$)
Age category:						
18-24	69	37	3577	1067	1234	333
25-30	53	29	3018	1200	1647	775
31-40	64	34	3986	2000	2534	975
Current employment:						
Unemployed	66	36	3173	1550	1094	717
Employed part-time	14	8	4770	1900	2085	875
Employed full-time	105	57	3673	1250	2232	667
Education:						
No HS/GED	57	33	2866	1333	1426	775
Completed HS/GED	117	67	3637	1250	1807	660
Consumed illicit drugs during target period:						
No	39	21	3867	1067	2366	817
Yes	147	79	3477	1333	1649	667

NOTE: Entries based on Winsorized distribution ($g = 3$). Differences are not statistically significant in analyses of variance of log-transformed dollars and nonparametric median tests. Sample size varies by dealer characteristic because of missing data.

DRUG-BUSINESS AND PERSONAL EXPENSES

Respondents' estimates of monthly expenses appear in Table 4.12. Because many respondents did not incur certain expenses, we present the median and mean expenses actually incurred, as well as the mean across all respondents (which includes zero values). The former statistics describe the typical magnitude of these expenses when they are incurred, while the latter describe the average expenses per respondent.²⁶ One-fourth of the respondents reported that they did not contribute to monthly housing expenses. More of them reported monthly clothing expenses (perhaps because that is generally an individual rather than household expenditure), and the expected value and median for clothing were both higher than those for housing.

²⁶As with the income estimates, we have Winsorized these distributions to adjust for extreme values ($g = 3$), but they are still highly skewed.

Table 4.12
MONTHLY EXPENSES

Source	Percent Reporting	Where Reported:		Mean across Full Sample ^a (\$)
		Median (\$)	Mean (\$)	
Living expenses:				
Housing	74	250	376	277
Food	80	150	226	181
Clothing	81	275	572	463
Transportation	73	100	234	171
Other	10	201	406	41
Total	94	725	1197	1126
Support for dependents outside household	51	585	849	433
Expenses associated with drug selling:				
Loan repayments	17	500	1051	175
Gifts	12	800	934	115
Loans to others	26	400	561	145
Transportation	21	108	337	71
Drugs	33	1000	3717	1226
Drug supplies and equipment	17	50	86	14
Other	5	450	404	20
Total	54	1064	3272	1759
Illicit drugs for own use	53	400	1596	883

^aIncluding zero values.

Although the contribution to their own households was often minimal, 51 percent of respondents reported that they provided additional monthly financial support to someone else, generally someone outside their home—a child, spouse, girlfriend, family member, or friend. This was true of 36 percent of those who did not contribute to their own household's expenses and 56 percent of those who did. This support generally included housing, food, clothing, and transportation for others, but respondents were often unable to break these expenses down, so we simply report total support to dependents in Table 4.12.²⁷

²⁷Specifically, after asking respondents to report their monthly living expenses, we asked those who reported dependents: "Not including the amount you've already mentioned, how much did you spend each month to support your dependent(s)?" Across the

In addition to their personal expenses, we asked respondents to describe the monthly expenses they incurred in the process of their drug-dealing activities. Only half our sample reported any such expenses. We may partially explain this finding by the fact that 22 percent were hired by others and hence may have had their expenses advanced to them, while another 9 percent were middlemen who may also have been in that position.

The major expense was the purchase of drugs. In a separate question, we asked respondents to estimate their monthly expenditure for drugs purchased for personal consumption; the final row of Table 4.12 shows this result. These two estimates of drug purchases were unrelated ($r[99] = .14$, not significant), suggesting that they were reporting distinctly different drug purchases. Just over half the respondents reported personal drug expenses. Among those that did, personal drug expenses typically comprised some 28 percent of net monthly drug income, or 20 percent of total monthly income. However, some respondents reported spending more on personal drugs in a month than they earned from drug sales.

Total drug-business expenses by frequency of selling appear in Table 4.13. As one would expect, daily drug selling necessitates greater drug expenditures.²⁸

Table 4.14 shows the correlations between income and expenses. The strongest relationship is between drug income and drug-business expenses. This finding may indicate that the amount invested in this

Table 4.13

DRUG-BUSINESS EXPENSES, BY SELLING FREQUENCY

Frequency	Sample Size	Mean (\$)	Median (\$)
Daily	67	3225	700
Several days/wk.	71	1314	42
1 day/wk. or less	41	407	0

76 respondents who reported support by separate category, the most commonly reported expenses were clothing (reported by 58 percent), food (47 percent), and housing (47 percent). Some respondents reported identical amounts for their own and dependents' housing, food, and so on, so there may be some double-counting in our estimates of living expenses and support for outside dependents. Unfortunately, we are unable to provide more specific information regarding the relationship between the respondents and the individuals they financially support.

²⁸ $F(2,177) = 5.80$, $p < .01$; median one-way test, approximate chi-square (2) = 4.63, $p < .10$ (marginally significant).

Table 4.14

ASSOCIATION BETWEEN INCOME AND EXPENSES

Category	Total Living Expenses	Support for Outside Dependents	Drug-Business Expenses	Personal Drug Expenses	Total Legitimate Income
Total living expenses	1.00	(a)	(a)	(a)	(a)
Support for outside dependents	.39 ^b	1.00	(a)	(a)	(a)
Drug-business expenses	.47 ^b	.22	1.00	(a)	(a)
Personal drug expenses	.20 ^b	.10	.17 ^c	1.00	(a)
Total legitimate income	.07	.16 ^c	-.09	-.08	1.00
Monthly gross income from drug selling	.43 ^b	.51 ^b	.51 ^b	.25 ^b	.17 ^c

NOTE: Entries are zero-order Pearson product-moment correlations.

^aNot applicable.

^bp < .001.

^cp < .05.

illicit activity helps determine how much is earned; alternatively, persons who earn a lot selling drugs may be more extravagant in giving gifts and loans. Total living expenses were related to drug-business expenses and to drug income. A weak positive correlation also existed between gross drug-selling income and income from legitimate sources.

The interview did not ask about savings or assets; such a question could have raised concerns in the respondent's mind about the seizing of assets and reduced interview completion rates. However, it would be interesting to learn whether respondents were spending all their earnings. When we added all sources of income (legitimate and criminal) and then added all recorded expenditures (business and personal, drug and nondrug), a modest discrepancy existed between the two. Income exceeded expenses; the mean difference was \$455 per month, while the median was \$216. We should not attach too much weight to these figures, however; they are the difference between two very rough estimates and consequently have much-magnified relative standard errors. Any overstatement of earnings or understatement of expenses (the latter perhaps arising from a failure on our part to categorize expenses in ways meaningful to this population) could greatly affect this difference.

PERSONAL DRUG-CONSUMPTION PATTERNS

As we can see in Table 4.15, respondents were generally quite frank in describing their personal drug consumption. Most respondents had tried more than one drug. The most popular drugs were marijuana and cocaine, followed by crack and PCP; relatively few respondents had tried heroin or methadone. These results are generally consistent with data from urinalysis of arrestees in 1988.²⁹

The ages at which respondents first tried these drugs approximates the drug-initiation sequence researchers have reported elsewhere (see, for example, Windle, Barnes, and Welte, 1989), with marijuana being tried more frequently and at an earlier age than the "harder" chemicals. Note that although the mean age for first trying crack is a relatively old 26 years, crack was unavailable until fairly recently. In fact, by subtracting respondents' age at first use of crack from their age at the time of the interview (summer and fall of 1988), we can derive a rough estimate of the year in which they first tried crack: 1986 for the typical respondent, but as early as 1984 according to at least 25 percent of them. During the target period, 79 percent reported use of some illicit drug; the mean number of drugs used was 1.70 (median, 2; stan-

Table 4.15

ILLICIT DRUG CONSUMPTION

Drug	Ever Used (%)	Mean Age at 1st Use	Used in Target Period (%)
Crack	52	25.9	31
Cocaine	72	22.7	48
PCP	54	21.1	28
Marijuana	77	16.5	42
Heroin	33	19.9	18
Methadone	7	27.2	2
Any drug	100	16.9	79
Any except marijuana	100	19.1	71

²⁹The District's urinalysis program does not include tests for marijuana, but analysts generally consider the use of marijuana to be widespread.

standard deviation, 1.36). If we exclude marijuana, 71 percent used an illicit drug during that period.³⁰

According to the responses we present in Table 4.16, the most frequently used drugs per week are heroin and methadone. However, when crack is being used, it is used the most frequently per day (more than three times for 40 percent of the crack users, followed by other forms of cocaine). Marijuana and PCP are consumed less frequently, and our three methadone users get one dose a day, every day.

Do our respondents sell the same drugs they use? Do sellers of any given drug also tend to sell some other drug? Do users of any given drug also tend to use some other drug? To answer these questions, we examined the associations among drugs sold and used for each respondent. In the interest of completeness, we present the results of this analysis in Table 4.17, but for readers who would rather not sift through all 55 correlations, we can readily summarize our findings in a few statements. First, dealers (especially crack and heroin dealers) tended to use the same drug they sold. (Similarly, dealers of multiple drugs tended to use multiple drugs [$r(185) = .32, p < .0001$].) Second, heroin dealers also tended to sell cocaine; otherwise, there were no systematic associations among drugs sold. Finally, there were some reliable associations among drugs used. Both PCP and marijuana users also tended to use crack and/or cocaine, and heroin users tended to use cocaine as well. Interestingly, crack users generally did not characterize themselves as users of other forms of cocaine, and vice versa, suggesting that users settled on a preferred method of cocaine consumption.

Table 4.16

FREQUENCY OF DRUG CONSUMPTION

Drug	Sample Size	Days/Week		Uses per Day		
		Mean	Median	Once (%)	2 to 3 (%)	> 3 (%)
Crack	59	3.3	2	33	27	40
Cocaine	84	3.2	2	37	31	32
PCP	44	2.8	2	50	32	18
Marijuana	65	3.4	3	45	37	18
Heroin	33	4.5	7	29	53	18
Methadone	3	7.0	7	100	0	0

³⁰The PSA reports that in 1988, 70 percent of arrestees in the District tested positive for some drug other than marijuana. Data specific to drug-selling arrestees are unavailable for 1988.

Table 4.17
ASSOCIATION BETWEEN DRUGS SOLD AND USED

	Drugs Sold					Drugs Used				
	1	2	3	4	5	6	7	8	9	10
Drugs sold:										
1. Crack	1.00									
2. Cocaine	-.18	1.00								
3. PCP	-.05	-.02	1.00							
4. Marijuana	-.09	-.14	.00	1.00						
5. Heroin	-.00	.23 ^a	-.03	.04	1.00					
Drugs used:										
6. Crack	.50 ^a	-.07	.00	-.01	.03	1.00				
7. Cocaine	-.11	.32 ^a	.01	-.14	.31 ^a	.09	1.00			
8. PCP	.05	-.04	.39 ^a	-.00	.04	.24 ^a	.17 ^a	1.00		
9. Marijuana	-.06	-.01	-.02	.29 ^a	.11	.20 ^a	.23 ^a	.14	1.00	
10. Heroin	-.09	-.01	-.10	.11	.52 ^a	.08	.30 ^a	.14	.02	1.00

NOTES: Entries are correlation coefficients. Because the matrix is symmetrical, we have omitted the redundant correlations above the diagonal to simplify the table.

^aStatistically significant correlations ($p < .01$).

CONCLUSIONS

The central finding of this analysis is that for dealers who are caught by the criminal justice system, drug selling is indeed a much more profitable activity than are that same population's legitimate occupations. Persons who sold on a daily basis reported median monthly gross earnings of \$3600 and monthly net earnings of \$2000; even this latter figure is more than twice what the same respondents might have expected to earn from full-time legitimate employment. Nor did they sell for many hours on days they sold at all. Many sold on only a part-time basis and earned correspondingly smaller, but still substantial, amounts.³¹

Our estimates of income from drug dealing are based on self-reports that are vulnerable to distortion through memory loss, and perhaps even through systematic exaggeration or underreporting. Reports of drug income were somewhat, but not completely, internally consistent

³¹Comparisons between legitimate and criminal earnings are potentially more complicated than the raw revenue figures suggest. Criminal earnings are not subject to tax; on the other hand, earnings in legitimate jobs are likely to involve employer payments of fringe benefits, such as Social Security and health insurance, as well. Given the large discrepancy between the basic payments in the two alternatives, there seemed little point in trying to make more refined comparisons.

across different interview questions, but we are comforted by the fact that the median discrepancy between self-reported income and expenses was only 13 percent of the median total income. The income data are much "softer" than typical data used in economic analysis, but we are measuring income from covert, serious criminal activity, and to our knowledge, better estimates are unavailable and would be quite difficult to come by.

We are confident that our estimates are more reliable than the anecdotal figures that often appear in the media. Thus, although our estimates likely contain some error, we believe that our statistics probably indicate the general order of magnitude of drug-selling income for full-time street dealers in Washington, D.C. That is, the typical net monthly figure is probably in the high hundreds or low thousands of dollars, but almost certainly not in either the low hundreds on the one extreme or the tens of thousands on the other.

Drug dealing appears to be a far more financially rewarding activity than other crimes. This assessment is based on the figures we report here and in App. D. Most property crimes yield no more than \$300 per offense and many yield a great deal less; committing a sufficient number to generate a monthly income of more than \$3000, though not impossible, requires a great deal of energy and luck. Previous studies of individual earnings from property crime, though mostly by the drug dependent (more committed but perhaps less skillful), point to earnings of less than half those reported by the active drug dealers in our sample.

The finding that most persons charged with drug selling are currently employed is somewhat perplexing. If drug selling is so profitable, why maintain a legitimate job as well—particularly one with a relatively modest wage? Understanding this phenomenon may have some policy relevance; we offer here some speculations.

First, consider the possibility that the job is used to limit current drug-selling risks (that is, those who want to keep their risks moderate combine legitimate employment with drug selling). In fact, persons who sell frequently are more likely than occasional sellers to have a job. Observation suggests the possibility that drug selling is complementary to legitimate employment. Such is the case for some other crimes, such as larceny, where employment (for example, as a store clerk) can provide improved opportunities for criminal activities. If work and drug selling are complementary, though, the nature of the complementarity is probably different. These drug sellers are generally apprehended selling in settings unlikely to be associated with their

employment; we cannot, however, discount the possibility that they sell in the workplace.³²

Second, the job may be a form of risk diversification. If the risks of drug selling—and the prospect of being unable to continue that career for very long—are salient, dealers may also wish to have developed a legitimate skill that can provide a reasonable source of income after their dealing career ends. Having a job may also help when a dealer is convicted and faces sentencing: Currently employed persons are likely to receive lighter sentences.³³

Perhaps a more useful way of viewing the relationship of drug dealing and legitimate work is to see that the former provides an underground form of “moonlighting” for poorly educated urban males—an opportunity for a few hours of more highly paid work to supplement their primary jobs. In particular, drug dealing may provide the kinds of employment opportunities, in terms of working infrequent hours, that college students derive from waiting tables in restaurants.

Few dealers in our sample reported working long hours at drug selling. Even those who reported dealing on a daily basis sold only an average of four hours per day. This may reflect the fact that the market for drugs probably has sharp hourly peaks. Few transactions occur during daylight hours; most buyers may seek to purchase in the early part of the evening. Thus, the opportunities to make high hourly earnings may be quite restricted.

This may also explain why many dealers sell only one or two days each week. Demand may be much higher on weekends or on paydays than on other days, offering narrow time slots with highly paid activity. Those who want to obtain high hourly earnings may have to be very selective about the days on which they sell. Comparisons of current earnings per hour from dealing with those available from legitimate work may be misleading since marginal dealing hours have a much lower return than the current average.

The finding of reasonably high employment rates is disturbing. It suggests that job creation, even of relatively high-paying jobs, may do little to reduce willingness to participate in drug markets. Certainly those who were most heavily involved in drug selling reported earnings from legitimate employment that were well above the minimum level.

³²Sellers may recruit potential customers at their place of work but sell to them only off premises, near where they can obtain drugs. If the workplace were a much safer site for selling, presumably they would avoid open-air locations vulnerable to police.

³³Such farsighted behavior would suggest that dealers would also make more effort to accumulate assets. However, the uncertainties of freedom and asset preservation (whether from the government or other participants) may limit even the farsighted dealer from asset accumulation.

V. ADOLESCENT ATTITUDES TOWARD DRUG DEALING

The previous data have referred to adults. Yet much of the current concern is with the attractions of drug dealing for adolescents. That significant and increasing numbers of youth are involved in drug selling is indicated by the rapid growth in District juvenile drug-distribution arrests in the past few years—from 220 in 1985 to 1657 in 1988. As we stated earlier, the barriers to researching juveniles' criminal behavior are substantial, and we were unable either to obtain a file on juvenile arrestees equivalent to the PSA tape we analyzed in Sec. IV or to interview a sample of adolescent drug dealers.

We were, however, able to take advantage of another opportunity to learn about adolescent involvement in—and attitudes toward—drug dealing. In the fall of 1988, The Urban Institute undertook a survey of ninth and tenth graders in inner-city public schools in the District of Columbia. The survey dealt primarily with substance abuse and delinquency. At the request of the Committee on Strategies to Reduce Chronic Poverty (a project of the Greater Washington Research Center, which provided some additional funding), the survey was expanded to include some questions on drug selling. In particular, the survey asked students about their involvement in drug selling, their perceptions of drug selling's risks and rewards, and their own expectations of future involvement in drug selling. In this section, we report some findings from that survey as analyzed by The Urban Institute (Brounstein et al., 1989).

SAMPLE AND METHODS

The sample consisted of 387 adolescents: 307 were sampled through their schools; the other 80, through other institutions. Researchers selected schools from the areas of the city with the highest levels of poverty so as to include a population that was at high risk of involvement in crime and other delinquencies. Ninth graders proved relatively easy to trace through the school system and provided a sufficient number of interviews. The interviewers experienced considerable difficulty in obtaining access to the tenth graders, which led to recruiting some older adolescents from recreation centers and a Youth Service center run by the Youth Service Administration. The ages ranged

from less than 15% (16 percent of the sample) to over 17% (22 percent). The subjects in the supplemental survey were generally older than those in school (36 percent were over 17%, compared to 19 percent in the school sample) and were more likely to have a grade deficiency (18 percent had a deficiency of two grades, compared to 11 percent in the school sample).

Personal interviews took place in various settings ranging from schoolrooms to parks and interviewer offices. The interview covered a wide range of topics, from family ties and religious upbringing to involvement in drug use and various personal and property crimes.

THE PREVALENCE OF DRUG SELLING AND DRUG USE

A surprisingly low percentage (11) of respondents reported use of any illicit substance in the previous year. Note, however, that among juvenile arrestees, in 1987 only 35 percent tested positive for any drug; in 1988 that figure fell to 30 percent, and by 1989 it was only 23 percent (only 18 percent in December). Note too that the probationer-dealer sample reported a median age for first use of marijuana of 16.5 and of nearly 20 for other drugs. The survey data are consistent with these other observations.

Marijuana was the most commonly used illicit drug, with 16 percent of interviewees responding that they had ever tried it; almost everyone who used an illicit drug in the previous year reported use of marijuana. The average frequency of marijuana use was just over once a week.

Perhaps the most striking finding was the high level of self-reported involvement in drug selling. One in six respondents reported having sold drugs; for those over 16%, the prevalence was almost one in three (31 percent). Of those who sold, 55 percent (35 out of 64) reported selling more than five times (defined by the survey as "frequent dealers"). Also striking was the fact that most (70 percent) of those who reported selling drugs did not report use of drugs. Even among the frequent sellers, a minority (37 percent) reported use of drugs in the previous year.

Drug selling was associated with several other delinquent behaviors. For example, of persons who had committed both personal and property crimes in the previous year, 39 percent had also sold drugs; only 3 percent of those who had committed no property or personal crimes had sold drugs.

Interviewers asked respondents about their perceptions of the prevalence of drug selling among their friends, in their school, and in their neighborhood. More than two-thirds of the total sample reported that

at least some students at their school were selling drugs; this percentage was twice that reporting that some of their friends sold drugs. Not surprisingly, the pattern was quite different for persons who sold drugs frequently: 84 percent of these sellers reported that some of their friends sold drugs, but only 77 percent reported that students at school sold drugs.¹ Overall, 50 percent of the total sample reported that some adults in their neighborhood sold drugs.

In sum, these adolescents saw drug selling as a part of the world in which they lived, whether it was in their schools and neighborhoods or among their circles of friends. Even among those who neither used nor sold drugs, almost two-thirds thought that drug selling occurred at school. In terms of perceived support, the major difference between sellers and nonsellers was that the former believed that most of their friends were involved.

PERCEPTIONS OF RISKS AND RETURNS

Respondents generally perceived drug selling as both very risky and very profitable. These perceptions were correlated with involvement in drug distribution itself: Those who had sold drugs more than a few times saw the activity as less risky and more profitable than did those who were not involved in drug selling. But even for sellers drug distribution appeared a risky activity, and even to nonsellers it appeared a profitable activity. We present the major results in Table 5.1.

Risks

Almost half the respondents (48 percent) stated that, in the course of a year, a drug seller would very likely get caught by the police. More than one-third (36 percent) thought that the dealer, once caught, would very likely spend at least a few months in jail. An even higher percentage (62) believe that a dealer was very likely to be injured severely or killed.

Persons classified as frequent sellers of drugs (having sold drugs at least five times in the previous year) were less likely to report high probabilities of these adverse events. But even in this group, 38 percent thought a dealer was very likely to be caught by the police, and 25 percent believed that an arrested dealer would very likely spend some time in jail. Some 50 percent thought a dealer had a high likelihood of

¹The difference in perceptions of friends' and fellow students' involvement in drug selling may reflect clustering (drug sellers hang out together and not with nonsellers) and the greater numbers of fellow students than friends.

Table 5.1
 ADOLESCENTS' VIEWS OF DRUG SELLING'S RISKS AND RETURNS
 (Percent)

Outcome	Frequent Dealers ^a	Other Sample Members ^b
	(n - 32)	(n - 355)
	Percentage Seeing Outcome as Very Likely in a Year of Drug Dealing	
Arrest	38	48
Prison sentence	25	37
Severe injury or death	50	61
Seller friends earn > \$1000/wk.	59	18
Students selling at school earn > \$1000/wk.	41	35

SOURCE: Brounstein et al., *Patterns of Substance Use*.

^aFrequent dealers are those reporting five or more sales in the previous year.

^bThose who sold infrequently or not at all.

being seriously hurt or killed; among the others, 61 percent had the same perception.

Respondents were also asked about how bad an experience staying in jail for a period would be. This question's purpose was to tap some observers' concern that for some parts of the population, imprisonment is not a serious enough punishment. When Urban Institute researchers combined this measure with the other perceptions of risks (arrest, getting seriously injured, and going to jail) into a single scale, differences of the expected kind occurred. Drug sellers saw less serious adverse consequences than did nonsellers, but the scale was still high for that group: On a scale of 1 to 100, with 100 representing the most adverse perception, it was 63, compared to 80 for nonsellers.

Returns

Interviewers asked respondents to estimate how much money drug dealers made each week. The question appeared in three forms: referring to "dealers generally," "student dealers," and "friends who were dealers." The highest category respondents could choose was \$1000 or

more. More than one-third (36 percent) of the respondents believed that this was the correct figure for student dealers. The question did not specify whether the figure was for net or gross income. Less than one-fifth believed that student dealers made no more than \$250 per week.

A slightly higher percentage of those who reported themselves as frequent sellers thought that students at school who sold drugs earned \$1000 per week (41 percent, compared to 36 percent of nonsellers). More striking was the difference in perceived profitability among friends who sold drugs: 59 percent of frequent sellers thought their drug-selling friends earned more than \$1000 per week, compared to only 17 percent of nonsellers. Presumably, frequent drug sellers do in fact know more about the returns to drug selling and correctly see it as more profitable. Their knowledge is likely to be best about their friends rather than about student sellers generally; thus, their perception of high returns among their seller friends should receive particular weight. Whether this perception of higher returns is the reason they are drug sellers or whether it is a consequence of their greater involvement is impossible to determine from the survey data.

Career Expectations

We were also interested in learning whether adolescents perceived drug selling as a possible career. Some 10 percent of the respondents stated that they were at least somewhat likely to sell drugs after finishing school. For those who had never sold, the figure was 4 percent; for current heavy sellers, 63 percent.

Such figures look less alarming than the reality for the immediately preceding cohorts, as we saw in Sec. III; we estimated there that 17 percent of the 1967 cohort had been charged with drug selling before age 21. The lower rate here may, however, reflect adolescents' inability to predict their own future behavior rather than any decline in youth involvement in drug selling.

Note too that most of those who thought they would be selling did not think selling would be their main occupation; even heavy sellers held this view. This observation is consistent with the finding that nearly two-thirds of the interviewed probationer-dealers reported less than full-time involvement in drug selling.

The survey asked respondents how much they admired persons in various occupations, from doctors and lawyers to clerks; drug dealers were included among these occupations. Some 82 percent of the respondents reported that they "did not at all admire" a person who sold drugs. Among the listed professions, the professional athlete was most admired, with 77 percent of respondents giving it the highest

rating; doctor received the second-highest rating (73 percent). The only occupation getting a lower approval rating than drug dealer was pimp; 92 percent admired a pimp not at all.

Finally, we should mention respondent views about how they would respond to seeing a person they knew selling drugs. Possible responses ranged from reporting the person to the police to warning friends away from him, to just ignoring the matter. Nearly two-thirds (65 percent) reported that they would ignore the incident. One can take a little encouragement, though, from the almost one-fifth (19 percent) of respondents who said they would try to warn the person of drug-selling dangers.

CONCLUSIONS

With respect to perceptions of drug dealing, the survey's message is clear. Boys in high-risk neighborhoods see drug dealing as a commonplace activity in their schools and among their friends. Moreover, the perception of prevalence is reasonably accurate, with one-sixth reporting some involvement in drug selling in the previous year.² Those who see it as more profitable, as commonplace, and as less risky are more likely to be involved in drug selling than are others. Because of the nature of the sample and the lack of longitudinal data, determining the causality is not possible; involvement may breed these attitudes, or these attitudes may lead to involvement. But even among sellers, the risks are seen as high. Particularly striking is the fact that nearly half of those who sell regularly think that a year of dealing will very likely produce serious injury or death; these risks fail to deter.

²If 1 out of 6 persons in the school population sells drugs and each person knows 60 persons (at least to the extent of having some confidence as to whether the person sells drugs), then most would report that "at least some" students at their school sell drugs.

VI. THE ECONOMICS OF DRUG SELLING

This study originated in a concern about drug selling's role in the economic life of the urban poor. To what extent has crime supplanted legitimate jobs as a primary source of income for young males with very modest labor force prospects? Has the apparent growth in recent years of opportunities for young persons to earn large incomes from drug dealing weakened the commitment to education and work among the poor? How has it affected the economic condition of the poor community? If the earnings of drug dealers are so high relative to their alternative occupations, what might explain those differentials? Has the involvement of these young males made drug control still more difficult?

The study's data enable us to answer none of these questions definitively. They do, however, shed some light on all of them. In this final section, we endeavor to pull together the various strands of data and analyses in the earlier sections to show what has been learned about these issues, and, in particular, to describe the significance of drug selling for young males at risk of poverty in the District of Columbia.

We begin by summarizing the empirical findings. Next, as a point of departure for our analysis of contemporary drug markets, we discuss the role illegal markets have played in the economic life of the poor in earlier eras. We then estimate the total earnings of street drug sellers and analyze the risks associated with street drug selling in contemporary Washington—risks that may well account for sellers' high earnings. After that we consider the relationship between drug selling and other kinds of work. This analysis leads to a discussion of policy options for reducing the role of drug selling in the poor community. We conclude with some comments about the relationship of our findings to those of related studies and about the path of future research.

PRINCIPAL FINDINGS

We can readily summarize the principal findings of our empirical investigation in four propositions:

- Drug selling is an activity in which a substantial percentage of young, poorly educated District males now engage; moreover, in the mid-1980s, this percentage appeared to be rising for successive cohorts of 18-year-olds.

- Drug selling appears to yield much higher individual earnings than does property crime.
- Drug selling, even on a steady basis, is an activity compatible with holding a legitimate job; for example, those who sell drugs are more likely to earn money from legitimate employment than to commit a property crime.
- Male adolescents in high-risk communities correctly perceive that drug selling yields much higher incomes than most of them can expect to obtain from legitimate pursuits. Perceptions of returns among potential youthful sellers are roughly consistent with actual earnings.¹ The same population also perceives that drug selling is an occupation that exposes individuals to high risk of physical injury and at least moderate risk of legal sanction; they do not, however, accord high status to drug sellers as an occupational group.

These findings are scarcely encouraging. They support the claims of some observers that many poor youths may be making a rational (more correctly, an informed) choice to enter into this activity. This fact complicates the task of discouraging entry into drug selling. Raising legal risks still further may be difficult: Inasmuch as doing so requires investment in building new prisons, the expense will certainly be great and the undertaking long term. Creating better job opportunities to compete with these returns is at best a long-term strategy: It offers little promise for current adult sellers who are drug dependent, but appears to have more promise for younger sellers who are not yet regular drug users. Before turning to these policy issues, examining the role of earlier illegal markets in poor urban communities will prove useful.

ILLEGAL MARKETS AND SOCIAL MOBILITY

The study of the links between poverty and crime has a long and honorable tradition. Poverty and lack of opportunity are probably the most popular explanations for the very skewed distribution of serious

¹Note that Viscusi (1986) found very large discrepancies between expected and actual criminal earnings of persons engaged in crime in his sample of inner-city black youths—expected earnings were more than five times actual earnings. In the Urban Institute survey, the wording of the question about drug-selling incomes was not precise enough for a careful comparison of expected and actual earnings.

involvement in violent and property crime across social groups.² Since the introduction of systematic measurement of victimization, that the poor are the group most heavily victimized by violent and property crime has also become clear.³ More recently, an interest in the possibility that crime is a cause as well as product of poverty has also emerged—that is, that areas with concentrations of poor people become economically stagnant because crime drives out investment and thus acts as a barrier to improving the residents' economic and social conditions (DiIulio, 1989).

For the poor, however, crime is not just a social problem—it is also (at least in the United States) the source of opportunity, of what Daniel Bell (1962) has referred to as the “queer ladder of social success.”⁴ Although Balzac's statement that “behind every fortune lies a crime” (and its corollary, “behind every great fortune lies a great crime”) is far too cynical, crime has doubtless been a source of social mobility. The children of third-generation mafiosi seem mostly to enter the professional middle class, even if an uncomfortably high percentage continue in the family business (Ianni and Reuss-Ianni, 1972). The social consequence of criminal incomes depends in part on the recipients' character and in part on the nature of the crime itself.

Illegal markets (that is, markets for prohibited goods or services) have historically been more likely than property crime to be the source of upward mobility. This reflects at least three factors: property crime (see App. D) generates modest incomes; until recently, persons convicted of property crimes have tended to serve longer sentences than those involved in illegal markets;⁵ and property crime has been a young man's occupation.⁶ Illegal markets have tended to be financially more

²White-collar crime, such as embezzlement, is much less well measured, as is its distribution across social class. For these crimes, opportunities (and, presumably, offense rates) may be positively related to education and employment achievement. Wheeler et al. (1988) show that persons convicted of federal white-collar crimes are much more likely to be college educated and steadily employed than are those convicted of “non-violent common crimes.”

³Individuals in households with less than \$7500 in income were almost three times as likely as their counterparts in households with more than \$50,000 in income to be the victims of a violent crime (Bureau of Justice Statistics, 1988, table 14).

⁴The reference was specifically to organized crime, itself a product of the growth of illegal markets in late 19th- and early 20th-century U.S. cities.

⁵This broad statement is supported by studies of the pattern of sentencing for gambling (Riedel and Thornberry, 1976) and by recent national statistics on sentencing for felony convictions (Bureau of Justice Statistics, 1989b). Increased severity of sentencing for drug offenses in the late 1980s may lead to a change in relative sentence risk of different crimes in the near future; see below for data on this matter.

⁶We can find evidence for this statement in age-specific arrest rates for different offenses. The rate per 100,000 males for robbery peaks at 1886 for 17-year-olds and declines rapidly to 285 for ages 30–34; the peak for gambling offenses occurs in the age range 35–39 (Federal Bureau of Investigation [FBI], 1986).

rewarding and less risky.⁷ Illegal markets have also possibly fostered work habits and provided on-the-job training that have more application in legitimate jobs than do the habits and skills of property crime. Running a small illegal business requires discipline, collaboration, and entrepreneurship—qualities that may prove useful in legal endeavors.

Illegal markets have been a prominent feature of big-city American life throughout the 20th century (Haller, 1979). The Prohibition era, which led to the sudden growth of an illicit liquor manufacturing and distribution system, was the period in which they received the greatest attention, but gambling⁸ and prostitution have been staples of the entire century. The contemporary cocaine market may be the most lucrative and the most violent, but it is certainly not the first large-scale illegal market. We can learn something about illegal markets' role in the economic life of the poor—particularly their role in economic mobility—by reviewing these earlier markets.

Drake and Cayton (1962, ch. 17), in their classic study of a black metropolitan community, refer to the high status of the numbers (“policy”) operator in black areas of Chicago in the late 1930s. After the Great Depression, these operators were among the major employers in the black community and became major patrons of charity, as well as prominent legitimate entrepreneurs. Drake and Cayton found that policy operators had “given some reality to the hope of erecting an independent economy within the Black Metropolis. . . . To open a policy business in Bronzeville makes any man something of a hero. For a policy king to do so also sets him on the road to respectability” (pp. 486–488). Selling numbers was compatible with operating a small retail establishment. Indeed, retailing (cigar store, newsstand, laundry) provided a perfect cover for the numbers activity; for description of a later period, see examples from Philadelphia offered in Rubinstein (1973).

We may not wish to use the term *respectable* for such criminal activity, but we have little reason to doubt that for those small retailers who generated additional income from numbers selling, criminal earnings helped put their children through college and generally better their families' quality of life. Retailers were not required to use violence and

⁷This situation raises the question of why other income-generating crimes are committed; the explanation may lie in the impulsive nature of those crimes and the need for patience and discipline in illegal market activity. Illegal markets may also generate greater dangers from other participants, not a significant source of risk in other criminal pursuits.

⁸Three forms of gambling have been significant. In the first half of the century, horse betting, numbers play (a version of lottery), and casinos were common. More recently, with the growth of state-operated numbers games, of legal casinos in Nevada and Atlantic City, and of televised sports, the major illegal market appears to be sports betting.

were not themselves much subject to victimization. The numbers game may have been an important source of upward economic mobility in the immigrant and black communities of northeastern and midwestern cities.⁹ In some cities, gambling operations were the strongest organizations within newer immigrant communities and provided an important connection to the attainment of political power.

This is not equivalent to asserting that these communities benefited in aggregate from numbers activity. Not only did some money flow from these communities to the bankers¹⁰ (financial operators), who were generally from other ethnic groups, but the games generated corruption of the local police and perhaps adversely affected overall savings rates. Nonetheless, the games may also have generated important individual and community benefits in the form of upward economic mobility for some poor persons. Poor people also found employment in providing numbers-gambling services to more affluent communities; numbers play was widely distributed in the urban population in the 1960s (Kallick, 1979), and some of the lower-level positions were probably the exclusive province of poorer people.

Light (1977) provides further insights on these matters with respect to the black community. Surveying a quarter-century of studies, he concluded: "Numbers racketeers have been the largest investors in black-owned businesses and the chief source of business capital in the ghetto" (p. 898). Light saw these racketeers as serving, inefficiently, the same function credit unions served in other poor neighborhoods that were without numbers gambling.

Numbers stands out among illegal markets for its relative lack of violence and compatibility (indeed, complementarity) with legal work. Prostitution (including the running of brothels), casino operation, bookmaking, and bootlegging all appear to have offered less complementarity (though undoubtedly some prostitutes, croupiers, and so on found ways of integrating these activities with legitimate employment).

The cocaine market exhibits some important differences from gambling markets and perhaps from illegal markets in general. Cocaine distribution appears to be the first illegal market in which youth have opportunities to be the primary entrepreneurs, instead of merely occupying support roles for adult distributors. In other drug markets (notably, for heroin), youth were employed by adult distributors because they were at lower risk of serious criminal justice sanction if arrested,

⁹Numbers has never been widely available in western cities.

¹⁰Reuter (1983, ch. 3) argues that a relatively small share of the operating margin went to the higher-level operators (bankers). The retailer had the market power and received the bulk of net revenue.

and were perhaps less likely to be arrested (see Ferguson, 1987). Even in this role youth could make large incomes; members of the Detroit heroin gang Young Boys Inc. reportedly made as much as \$250 per day as selling agents (Ferguson, 1987, p. 10).¹¹ But large incomes for the young may not have the same implications for social mobility, given their short planning horizons; horizons are likely to be particularly short for poorly educated young males.

Nonetheless, illegal markets have historically provided some earnings opportunities for poor communities and have generated concentrations of wealth that have permitted investment and mobility. The evidence we present in this study suggests that such is probably not the case with respect to drugs, particularly with respect to cocaine. We turn now to our analysis of risks, rewards, and careers in contemporary drug markets.

INCOME FROM CRIME

We started with the hypothesis that drug dealing yielded substantially higher returns than did property crime. This hypothesis and the presumed growth in drug incomes were the major impetuses for the study. The data confirmed this hypothesis; see App. D for details of our estimation of earnings from property crime.

Income from Property Crime

For property crimes other than shoplifting, a reasonably precise estimate of total earnings is derivable. For the entire Washington, D.C., metropolitan area, our estimate was less than \$70 million; many incidents occurred, but some crime categories have a low yield per incident. Even when we add (the more fragile) estimates of earnings from shoplifting to those from other property crime, the total figure is still modest: \$150–\$225 million. The total income going to District residents is presumably much smaller. With some shaky assumptions about who commits each type of crime, we estimate that poor persons in the metropolitan area may receive \$77–\$133 million from this source.

The number of persons involved in such crimes is large. Arrests for property crimes in the Washington metropolitan area totaled 25,000 in 1987; hence, average earnings per offender are likely to be modest,

¹¹Mieczkowski (1986) interviewed 14 Detroit youths, who provided self-reports on earnings from drug dealing. Eight reported daily earnings of less than \$200 from dealing, though most reported working long hours—frequently 8–12 per day.

particularly given that few arrests were for shoplifting (which accounted for most of the total earnings).

Property crime seems unlikely to have become a significantly more important economic activity for persons with poor labor force prospects in recent years. Washington data show no increase in the scale of property crime during the 1980s. For example, the number of reported property crimes in 1987 for the District of Columbia (42,783) was actually sharply lower than the number in 1981 (53,870).

Drug sellers, at least when active in the market, do not seem to be heavily involved in property crime. For those who can engage regularly in drug selling, property crime is probably an unattractive option; as we stated earlier, many more report legitimate employment and earn far more from it. The available data on property crime generally suggest that those involved are very young, with participation rates peaking in the late teens; most drop out of this activity by their mid-20s.¹² Drug selling may be a later career option. It does, after all, require either a certain amount of trust on the part of other participants or access to some capital; it also demands more regular work habits than does property crime, much of which is impulsive.

None of this is to say that property crime is not a serious social problem. It does, however, offer modest total financial rewards, though possibly a much higher hourly wage and a more flexible working day than the legitimate jobs available to most offenders. But developments in the activity's economic attractiveness that would lead to weakened labor market performance by poor young males do not appear to have occurred.¹³

Estimating aggregate income from property crime also permits us to determine whether such income might account for a substantial portion of the funds used to purchase drugs in Washington. Even if we were to assume that most of this money went to purchase drugs in the District, it would appear to account for a modest share of total revenue received by drug sellers operating in street markets (surely the locations in

¹²Blumstein and Cohen (1979) report declines in the percentage of the age group active in property crime after age 19. However, persons who remain active continue to commit these crimes at approximately the same rate in later years.

¹³Mark Kleiman (personal communication) suggests that the diversion of criminal justice resources to drug enforcement may have lowered the enforcement risk associated with other crimes, including thefts of various kinds. If this is so, it has not yet resulted in an increased number of reports of property crime. The 1988 rate of property crimes per 100,000 people in the District is higher than the 1985 figure (the lowest of the decade), but is slightly lower than that of 1980. This situation may in turn be explained by the higher returns available from dealing: Potential property offenders may now be more active in drug selling.

which active property offenders are likely to purchase most of their drugs). We now turn to the revenue generated in street drug markets.

Total Income from Drug Dealing

To estimate total income from drug dealing, we need estimates of the total number of dealers and of their average earnings. Before proceeding, we must be careful once again to qualify the domain of coverage. The criminal justice system has the ability to reach systematically only a portion of the dealer population—namely, that which is involved in the open or street distribution of drugs.¹⁴ If, for example, the dormitories of local universities serve as sites for the distribution of drugs to their residents (as the popular belief holds), the criminal justice system is ill situated to reach these “indoor” sellers. Thus, given the study’s dependence on information about persons apprehended by the local police, we are estimating the income associated with street distribution only.

Note too that the following estimates cover only the resident District population. The income may be generated by sales to non-residents, but we have restricted our analysis to District of Columbia resident sellers because they are the ones most likely to be captured in the PSA and probation systems.

Given the skewness of the earnings data (as shown in Sec. IV), estimating the number of dealers in categories that differ by income potential—that is, by selling frequency—seems appropriate. The assumptions and conventions for our calculation of dealer numbers are as follows:

- Two classes of dealers exist—regular and occasional. We classify as occasional those who sell one day per week or less; the others (daily or more than one day per week in the Sec. IV analysis) we classify as regulars.
- Of persons charged with selling drugs, three-fourths are regular sellers and only one-fourth are occasional. This proportion reflects the prevalence of the two classes in our probation sample. Regulars are more likely to be arrested than are occasionals because they have longer exposure time; on the other hand,

¹⁴High-level dealers, even including their agents, are few in number compared to the number of retailers. The police may make cases against such dealers, and these cases may have a particular significance for drug control, but the resulting number of individuals charged will be small when compared to the retailer population charged.

occasionals are more likely to receive probation rather than prison if convicted.¹⁵

- Of persons charged with drug possession, three-fourths are in fact sellers. This situation reflects the very high rate of possession arrests reported by sellers on probation. Moreover, the demographics of the population charged with drug possession are very similar to those of the population charged with drug selling, suggesting considerable overlap. The methods by which drug possession arrests are generated also suggests that many arrests are of dealers for whom insufficient drugs or other indicative evidence was available to support a distribution charge.
- Of dealers charged with possession only, four-fifths are occasionals and only one-fifth regulars. This reflects the higher incidence of selling charges reported by regulars.
- Regular dealers face a one in two probability of being charged with a drug offense in any one year; occasional sellers face a one in three probability of being so charged.¹⁶

These assumptions (except perhaps for the last) seem to represent a "conservative" use of the data in that they tend to produce low estimates of the number of regular sellers, which in turn will bias downward total income estimates. The total number of persons in the District charged in 1987 with drug selling was 6922; for drug possession, the total was 4207. Using the above assumptions, we arrive at 11,644 regular dealers and 12,893 occasional dealers, giving a total of 24,537 dealers. Note again that these figures are only estimates of the populations involved in street markets. Note too that they are estimates of the number of adult dealers aged 18 or over who were active in those markets that year. We lacked access to juvenile records that would permit estimating the number of juvenile drug dealers. The 1550 arrests of juveniles for drug selling and the Urban Institute survey

¹⁵Experience may enable a dealer to lower his exposure per transaction or hour; this may still leave him with a higher annual exposure rate. Note too that sentencing reflects criminal record, not frequency of selling, since selling frequency is not available to the court; presentence reports, used in sentencing proceedings, provide only limited information on that matter.

¹⁶This assumption is the most questionable; one reviewer thought that a higher probability should be assigned to arrest for regular dealers. Note that of those District resident black males (aged 18-29) who were charged with drug selling in 1986, 21 percent were charged with selling again in 1987. Given that some were imprisoned during at least part of 1987 because of their earlier drug charge, this clearly underestimates the probability of arrest within a year of regular dealing. A 50 percent charge rate is consistent with an imprisonment fraction of one-half (that is, half the persons charged in 1987 were incarcerated [see Sec. III]), with 21 percent being recharged within the year, and with a modest desistance rate (associated with maturing and death).

finding that 16 percent of the sample (mostly under age 18) sold drugs in the previous year imply that several thousand such sellers may exist.¹⁷

For average annual earnings for each category, we initially used the mean gross earnings. Thus, we assigned annual incomes of \$55,000¹⁸ to regular dealers and \$9000 to occasional dealers; this yielded aggregate earnings of \$758 million, of which 85 percent went to regular dealers. Using net income instead of gross, the figures were, of course, substantially lower—\$354 million, of which 93 percent went to regular dealers.

Neither the gross nor the net figure is entirely satisfactory as a measure of this population's earnings. The gross income figure is too high because it includes payments to persons higher up in the distribution chain, most of whom are outside our purview or who may already be counted in our estimates; remember that more than a fourth of our respondents had underlings. On the other hand, the net income figure does not take into account the drugs received as income in kind; 10 percent of our sample numbers kept more than half the drugs they acquired for sale, and another 30 percent kept some smaller amount of drugs. Each figure, net income and gross income, is relevant for particular purposes.

For the purposes of estimating what share of total drug expenditures might be funded by property crime earnings, gross revenue is relevant because it represents a measure of total sales. At \$758 million, the sales are more than three times greater than the upper bound of our estimate of total metropolitan earnings from property crime;¹⁹ given other uses of the funds, property crime may be the source of less than one-fifth of expenditures on drugs.

The net earnings figure is the more meaningful measure of drug selling's economic significance for particular population groups. In this context, comparing the earnings from drug dealing with those generated by legitimate employment of black males aged 18–40 in the District is worthwhile. Some five-sixths of the District residents charged with drug selling fall into this category, so assigning them five-sixths of the estimated total earnings (that is, approximately \$300 million in net

¹⁷We lacked data on the residence of juvenile drug-seller arrestees or on the frequency of rearrest and imprisonment. This lack precluded our developing a systematic estimate of the number of resident juvenile dealers.

¹⁸This figure is the average gross earnings of "daily" and "several days per week" treated as a single group; see Table 4.10.

¹⁹Although using a measure of District earnings from property crime would be preferable, no such estimate is available. Note, however, that (as we suggested in Sec. III) some evidence exists that the District attracts substantial numbers of non-District residents as buyers.

earnings) seems reasonable. Starting with 1980 census data and making various adjustments,²⁰ we estimate total legitimate income for black males aged 18-39 living in the District to be approximately \$1.2 billion. This suggests that drug selling generates approximately a fourth as much as legitimate activities for this population group.²¹

The chain of assumptions we used to generate our estimates of the total number of dealers in each group is long and fraught with risk; a claim of two-digit accuracy would be spurious. However, we can support the high probability that drug dealing provides several (perhaps even many) hundreds of millions of dollars to lower-level participants drawn heavily from the less-educated segments of the young male population. Indeed, it seems to yield substantially more than property crime in total, particularly when we note that the property crime income estimates cover a much broader area and population.²² In particular, drug selling appears to be an important source of income for young black males in the District.

RISKS FOR DEALERS

The framework we presented in Sec. II emphasized the role of risks as a potential determinant of earnings from drug selling. We now examine the available evidence on the size of those risks.

Notwithstanding the claim of turnstile justice, drug distribution (at least in the more exposed settings from which most persons arrested are drawn) is apparently a high-risk game. Note that 11,450 District residents were charged with drug distribution between 1985 and 1987. Though we only have data on who gets caught, we base the statement about enforcement risks, at least for young black males, on two observations.

²⁰The 1980 census provided estimates of mean income of black males in the District in five-year age ranges from 15 to 39. To adjust for growth in money incomes since then, we multiplied these averages by the growth from 1980 to 1988 in the national average black male income for each age group. These figures were then multiplied by the District estimate of total population falling into that age category, which we discuss in App. A. The available income data did not permit us to separate out persons aged 15-17 and thus produce an estimate for the age range 18-39, the range covered by the dealer data. However, the legitimate earnings of the entire age group 15-19 accounted for only 5 percent of the total (relatively few persons in their mid-teens being employed), so this makes little difference for the rough comparison we are making.

²¹The legitimate income estimate includes transfer income, though for males in these age groups transfers are likely to provide a modest share of the total.

²²Again, note that the drug-dealer income estimates exclude juvenile dealers; there is no such exclusion of juvenile offender earnings from the property crime income estimate, which is based on incident reports.

Enforcement Risks

First, the percentage of recent cohorts of black males charged with drug selling, including "possession with intent to distribute," is extremely high. If young males involved in selling drugs regularly face less than a one in three chance of being charged with that class of offense, then nearly half the 1967 cohort would have been engaged in the activity before reaching the age of 20. Such a percentage strains credulity.

Second, risks of incarceration if arrested are also high. Despite the overcrowding of correctional facilities, a dramatic increase in the number of persons committed to Lorton on drug charges has occurred in recent years. The Department of Corrections had 1153 persons under its supervision for drug-sales offenses in August 1986; by June 1987, that figure had risen to 2027. The Department of Corrections also calculated that 2437 drug offenders were sent to Lorton in 1987.²³ Given that the offender needed to be convicted of a felony to be sent to Lorton, the vast majority of them have been convicted of drug selling rather than possession. In addition, a few hundred convicted dealers were committed to federal prisons;²⁴ others received sentences of less than a year, so served time only in jails. Note again that only 6922 persons incurred drug-selling charges in 1987. Though some persons committed are nonresident sellers, in recent years District residents arrested for drug selling appear to have faced a significant risk of being incarcerated—perhaps as high as one-half.²⁵

Distinguishing between the probability that an arrested individual will be imprisoned and the probability that an individual arrest will lead to imprisonment is important. Many individuals are arrested while out on bail from a previous arrest; they may plead guilty to, and receive a prison sentence on, charges arising from only one of the arrests. The charges arising from the other arrest may be dismissed,

²³These are persons whose most serious conviction charge, using the FBI hierarchy, was drug selling. Others committed may also have been convicted of drug selling but were sentenced on some more serious charge. Analysis of the charge patterns in the PSA data, though, suggest that simultaneous charging with drug distribution and nondrug felonies is rare.

²⁴Data on offense-specific commitments of District offenders to federal prisons are unavailable. In April 1987, the U.S. Bureau of Prisons reported 650 inmates serving time for violation of District of Columbia drug laws. The daily average population in federal prisons for District of Columbia offenses was 2247 in 1987.

²⁵These are only rough calculations. Commitments in 1987 included many persons charged in 1986; similarly, many persons charged in 1987 were not sentenced until 1988. The PSA data did not uniformly include sentencing data, let alone time served, so we were unable to make an individual-level imprisonment rate estimate. The data management system of the U.S. Attorney's Office does not include sentencing data in published reports.

thus implying (incorrectly) that the individual went free.²⁶ This is consistent with the observation of criminologists that few long-term chronic offenders avoid frequent and lengthy spells in prison.

Earlier in this section, using both a set of assumptions about risks of arrest and rearrest and the PSA data, we estimated that the total street-dealer population was approximately 24,000. This figure permits rough estimates of various risks associated with street dealing.

We begin with risk of imprisonment. Given 3000 commitments to prison and an average time served of 18 months (Reuter et al., 1988, p. 39), we arrive at a total of 4500 prison years handed out to the total dealer population. A dealer can then expect to serve 2¼ months of prison time as a consequence of a year's selling, assuming that we can project forward 1987 experiences. An alternative means of expressing this is to say that at any one time, 3/16 of the dealer population is incarcerated.

However, many dealers sell only on an occasional basis. Thus, calculating the risks on the basis of "regular dealer years" (a rough analogue of full-time equivalent) is more appropriate and reflects the fact that risks may rise roughly proportionately with time of exposure. Assume that occasional sellers (one day a week or less frequently) sell only one-fifth as frequently as regular sellers (not all of whom sell full-time). We then have the equivalent of 14,200 regular dealers. The incarceration risk now becomes almost four months per year of regular dealing—that is, the regular dealer spends one-third of his selling career in correctional facilities.²⁷

Risks of Injury or Death

Violence also poses a great danger to participants. With respect to death, the MPD estimates that 50–80 percent of killings in recent years have been drug-market related. With 227 homicides in 1987 and 372 in 1988, we estimate some 200 killings per year of drug-market par-

²⁶It may be argued that the second offense was "free." However, the sentence imposed for the first offense may be higher because of this subsequent charge (for example, in plea bargaining the defendant is willing to accept a higher sentence in exchange for the court's dropping the second offense).

²⁷Using the data on number of transactions per day (Table 4.6), we can convert this figure into a risk per sale. The median number of sales per day was 13; 22 days of selling per month by full-time dealers yields 286 transactions per month. The full-time dealer faces an expected prison time of 10 days per month (240 hours). This figure translates into approximately 50 minutes of prison time per transaction. Because not all regular dealers are full-time, this estimate of incarceration risk per transaction is low.

ticipants.²⁸ With a population of 24,000 dealers, the risk of being killed was approximately 0.8 percent. Using a "regular dealer year" basis, we found the risk of being a homicide victim was 1.4 percent.²⁹ If that rate persisted for a decade, an individual who was a regular dealer for the entire period would have a one in seven chance of being a homicide victim.³⁰ Note that in 1987 approximately 3000 dealers—some regular and some occasional—were imprisoned. To some extent, the incarceration and homicide risks are substitutes; consequently, we may have overestimated the risk of incarceration and underestimated the risk of death per year of regular dealing.

These calculations do not take into account the risk of severe injury, likely to be high wherever extensive use of firearms exists. For example, Zimring and Zuehl (1986) estimate that 10 percent of robberies in Chicago resulted in a serious injury, while only 0.7 percent resulted in a killing; these percentages suggest a ratio of approximately 14 to 1. Note that these data reflected robbery before what appears to be an increase in the heaviness of guns used in street crime. The increased lethality of guns has likely raised the ratio of deaths to serious nonfatal injuries.

Data on the number of District of Columbia police reports of nonfatal gunshot wounds are available for 1989 but not for earlier years.³¹ For 1988, we estimate a total of 1148 nonfatal gunshot wounds. This figure compares with 269 gunshot deaths in the same year. If the ratio of injuries to killings is the same for drug-market related shootings as for all shootings, this yields some 800 gunshot injuries. To this figure we add another 25 percent to cover injuries caused by weapons other than guns; such weapons account for some 20 percent of all killings and are more likely than guns to result in nonfatal (as opposed to

²⁸Note that the dealer population estimate is based on 1987 data but that the income estimates cover 1988. Thus, we have used an average of 1987 and 1988 data to reflect the relevant risks.

²⁹The homicide estimate includes juvenile victims, whereas the dealer population estimate covers adults only. The number of homicide victims in 1987 under the age of 18 was 19—8 percent of the total. No estimate is available as to how many of these were drug-market related. Given the indicative nature of the calculations we present here, we have made no adjustment for this group.

³⁰Some persons classified as drug-related murder victims may be customers with no other involvement. We judge, on the basis of homicides described in the newspapers, that relatively few victims fall into this category.

³¹For both 1988 and 1989, data are available on the number of assaults with firearms (a police department figure): 1573 in 1988 and 1879 in 1989. The 1989 assaults resulted in 1371 nonfatal gunshot wounds. Assuming that the ratio of nonfatal injuries to assaults with firearms was the same in 1988 as in 1989, we arrived at a total of 1148 nonfatal gunshot injuries in 1988.

fatal) injuries. A total of 1000 injuries per year implies a risk of 7 percent per year of regular dealing.

Comparing the risks of violent death or injury associated with drug selling to those confronted by young black males in large cities in general—the subject of much concern in recent years (U.S. Department of Health and Human Services, 1986)—is useful here. In 1983, the Federal Bureau of Investigation (FBI) estimated that the lifetime risk of being a homicide victim was 1 in 21 for a black male, compared to only 1 in 131 for a white male (Uniform Crime Reports [UCR], 1983). The risks appear higher for black males in large cities than for black males elsewhere, and may have risen substantially since 1983 as the homicide rate nationally has risen and become increasingly concentrated.

Moreover, the risks are particularly high for black male adolescents and young adults—indeed, homicide is the leading cause of death for that group. For black males aged 18–24, the homicide mortality rate was 78.2 per 100,000 in 1981; it rose to 136.9 for the group aged 25–34. This latter figure, if stable over time, implied that a black male faced a cumulative risk of more than 1 percent of being a homicide victim between the ages of 25 and 34.

These risks are very high, particularly when compared to the white or female population. Nonetheless, drug dealing appears to elevate this risk by perhaps as much as an order of magnitude. Although calculating not simply the risks associated with drug selling but how much an individual in a particular sociodemographic category elevates his risk by entering into the drug trades would be desirable, the above calculations suggest that this adjustment is unlikely to make much difference. Moreover, the risk of being incarcerated or seriously injured as a result of participating in the drug trade appears extremely high.

Adolescents' Views of Drug-Selling Risks

The Urban Institute interviews with ninth and tenth graders show that the members of the next cohorts most at risk of becoming involved in drug selling seem aware of the hazards involved. Indeed, it is interesting to note that the ninth and tenth graders appear to overestimate the physical risks and underestimate the legal risks of drug selling. More than half thought it very likely that a drug dealer would be killed or seriously injured in the course of a year. Our calculations suggest that the risk is less than 10 percent—still very high, but far from meriting the judgment of “very likely.” On the other hand, we estimate that the probability of arrest is indeed very high—perhaps one in two. Yet far fewer of the respondents thought this hazard very likely.

In this respect, our sample showed the same biases that have been found in numerous studies of risk estimation. Slovic, Fischhoff, and Lichtenstein (1982) point to the importance of media stories about particular hazards in the formation of judgments about their probability. For example, reporting on a sample of college students and the League of Women Voters, the researchers note that "homicides were also judged to be about as frequent as death by stroke, though the latter claims about 11 times as many lives" (p. 467). The media report deaths and violent injuries in the drug trades with more prominence than they do arrests and imprisonment, so it is perhaps not surprising that the trade's physical hazards bulk disproportionately large in the young male's mind. We shall comment later on the potential significance of this phenomenon.

PARTICIPATION AND WORK

Has street drug selling attracted a new group of persons into serious criminal careers, or has it simply improved the earning opportunities of those who would in any case acquire serious career records? Our data do not permit strong conclusions on this issue; they do, however, suggest that little recruitment into drug selling of a population that would otherwise be lightly involved in criminal activity has occurred.

The probationer-dealers generally reported involvement in a wide range of criminal activities over their careers. We did not have sufficient detail on the sequence of their careers to make inferences about causality, but their relatively slight involvement in other crimes during the six months before probation suggested that they had engaged in these activities earlier. Previous research on the correlates of delinquency (see, for example, Elliott, Huizinga, and Ageton, 1985) suggests that the dealers' generally long drug-using careers point to high risks of extensive criminal involvement, even excluding drug dealing. That the adolescent dealers interviewed by The Urban Institute, despite low rates of self-reported drug use, also tended to show other signs of deviance is interesting; they might, even in the absence of drug-selling opportunities, have become involved in criminal pursuits.

The poor educational attainment of persons charged with drug selling and drug possession provides further evidence for this. As we reported in Sec. III, comparing the high school completion rates in drug selling and other offender groups, we found a lower completion rate among the drug sellers. If dealing attracts entrepreneurs, it does so at an early enough age that they are less likely to finish high school than are other offenders. The PSA data, lacking juvenile records, do not permit us to test this hypothesis rigorously.

Drug Dealing and Economic Mobility

Drug dealing generates large incomes per month; few persons involved in the trade could earn monthly incomes from legitimate employment that would be even half as high as those available to full-time dealers. If they earned these incomes over a sustained period, they could potentially enter into legitimate entrepreneurial activities otherwise unavailable to them, as did many policy operators in the past. However, the figures we gave above for risks of arrest, imprisonment, serious injury, and death suggest that long periods of steady earnings are unlikely to be common. The expected lifetime earnings from drug selling do not appear to offer prospects of capital accumulation and later business success. The available data did not permit any description or analysis of long-term dealer careers, so this statement is speculative, based on observations at a single point in time.

Drug sellers' heavy involvement in drug use also militates against economic mobility. The vast majority of sellers are users of drugs other than marijuana. Even though they may be able to finance their own consumption at much lower wholesale prices while active in the business, they are likely to develop expensive dependencies that make financial accumulation and exit from the business difficult. Continued participation gives them a lower price for their own drug use, but even then (as we demonstrated in Sec. IV) they spend a substantial amount on drugs: The half who purchased drugs for personal use had median expenditures of \$400 per month.

The high risks of imprisonment and death, together with some risk of asset seizure, also reduce the incentive for capital accumulation. If the common perception of a penchant for conspicuous consumption is correct, accumulation is even less likely. In sum, despite the high monthly incomes of active sellers, drug selling seems unlikely to provide the poor with as good a base for upward mobility as did some earlier illegal markets (notably, the numbers business).

Drug Dealing and Legitimate Employment

With respect to employment as an indicator of the possible alternative careers in the absence of drug-market opportunities, the data are ambiguous. On the one hand, in the sample of probationer-dealers, those with the strongest commitment to drug selling (as revealed by the frequency of their dealing activities) seemed to show slightly higher legitimate earnings than did those who sold less frequently. Within the drug-selling population, success in dealing seems positively correlated with labor market success; this correlation is consistent with the

“entrepreneurial” hypothesis. On the other hand, the employment rate of drug dealers as a group (in the PSA data) is not significantly different from that of others in the criminally charged population.

POLICY IMPLICATIONS

This study has not been primarily about policy; rather, its aim has been to examine the role of drug selling in the lives of young persons at risk of long-term poverty. Nonetheless, it does have some implications for public policy, both with respect to drug control and to urban poverty.

The general public now perceives drug dealing as a serious criminal offense and punishments are of increasing severity.³² Conviction for drug-dealing offenses may have even more serious effects on the career of a young individual than conviction for a property offense.

Drug Selling's Allure

For policy purposes, considering the various possible motivations for involvement in drug distribution is helpful. Drug selling among young males at high risk of poverty may be generated by their need to support an expensive drug habit—a habit perhaps partly resulting from the low self-esteem engendered by poor prospects of work-force and legitimate economic success. The data we collected in this study did not permit us to determine the causal relationship between drug use and drug selling. Both from our own data and from the PSA urinalysis data, we know that the vast majority of adult drug sellers are current users; in 1986, more than 80 percent of drug offenders³³ in the District tested positive for some drug other than marijuana.

Clearly most persons who sell illicit drugs also use them. Earlier studies (for example, Clayton and Voss, 1981) have found evidence that regular use of drugs is a good predictor of involvement in selling; those studies, however, took place before cocaine (and particularly crack) became widely available. Given the high returns now available to young sellers in the cocaine and crack markets, selling may well precede drug use—or at least heavy drug use. That the Urban Institute

³²In California, for example, between 1981 and 1987, the percentage of persons convicted of felony drug offenses (primarily drug distribution, but also marijuana growing) who received state prison sentences rose from 5 to 15 (California Department of Justice, 1988).

³³Published data do not provide separate figures for persons arrested on drug possession as opposed to drug distribution. Nor are post-1986 data available on an offense-specific basis.

survey of ninth and tenth graders found only moderate overlap of sellers and users supports this hypothesis.

But drug use is by no means the sole motivation or opportunity for entry. Drug dealing now offers poorly educated young males potential earnings that appear far higher than any other activity—at least in the short run. A tax-free \$40,000 per year is much more than such persons might reasonably expect to earn from working hard at unskilled or semiskilled jobs. For some, drug dealing may also be associated with the prospect of making still higher incomes if they move up in the drug trades (an unlikely outcome for most persons in conventional employment).³⁴ Again, the reports of dealer Rayful Edmond's enormous financial success, achieved in a short period of time from a very modest beginning, may provide an unfortunately powerful role model.

The Relationship between High Income and Risk

Why can a large number of young, poorly educated males earn such high incomes from the drug trades but not from other criminal activities? Perhaps we can find the answer by analyzing the actual and perceived risks drug sellers face. We use here the approach described in Sec. II. What income would dealers require as compensation for incurring the risks of death, injury, or imprisonment to which they are currently exposed? A simplified calculation necessitates measures of the number of deaths, injuries, and years of prison time imposed per annum, as well as of the value this population ascribes to a particular level of risk of death, injury or year of imprisonment. For more sophisticated calculations (taking into account heterogeneity in risk attitudes in the population), we need even more data—of kinds not available.

We return to the figures discussed earlier in this section on homicides, serious injuries, imprisonments, and number of sellers: 200 deaths, 1000 serious injuries, 3000 imprisonments (average time served: 18 months), and 24,000 sellers. When we convert these results to a regular dealer year basis (to reflect many sellers' very infrequent participation), they represented risks of 1.4 percent (death), 7 percent (serious injury), and 4 months (imprisonment). These risks are very high compared to those associated with legal employment. Even for a police officer—an occupation usually considered hazardous—the annual risk of a job-related death is less than 1 in 1000; for a serious injury, the risk is less than 1 percent. The physical hazards of drug dealing in mid-1980s Washington, D.C., were an order of magnitude greater. We

³⁴Reuter and Haaga (1989) report a high degree of internal mobility in the cocaine and marijuana markets; many higher-level dealers they interviewed rose in the business from the retailing level.

offer the following estimates of the possible "risk compensation" component of drug dealing as merely suggestive, precisely because the empirical studies used to develop these estimates deal with occupations having so much lower risks.

Conventional estimates of a life's value, used in studies of compensating wage differentials for risks of work-related deaths in legitimate occupations, range between \$500,000 and \$7 million in 1982 prices (Viscusi, 1983). The value depends, among other factors, on lifetime earning potential and attitudes toward risk. Persons who choose more risky occupations have been shown to be less risk averse than the employed population in general; consequently, they require less of a differential to incur those elevated risks. Thaler and Rosen (1975) found that persons who took jobs with a 1 in 1000 risk of a fatal accident implicitly valued life at \$580,000—substantially less than estimates from samples facing the more normal risk of 1 in 10,000.

That the population of drug sellers active in the streets of Washington requires less money to accept a given risk than does the general population seems highly probable. They have, after all, selected an occupation with a fatality rate some hundred times higher than that of the general work force. Moreover, their alternative low-risk occupations provide much lower wages than those available to the broader samples on which these value-of-life calculations are based. If we take the low end of the value-of-life estimates Viscusi presents—\$750,000 (adjusting for inflation since 1982)—then we get \$7500 as the compensation required for incurring a 1 percent risk of death. This figure is subject to two sources of error. On the one hand, it may be high because of street dealers' low alternative earnings and revealed preference for higher-risk activities. On the other, the assumption of risk neutrality (that is, that a tenfold increase in risk has the same proportionate effect on the required compensation, regardless of whether the base rate is 0.01 percent or 0.1 percent) will understate the required compensation. We treat the figure of \$7500 for a 1 percent excess risk of death as indicative only.

For the risk of injury, we again turn to the valuations estimated in the course of workplace injury studies. Viscusi (1983) reports four estimates of nonfatal injuries' implicit value. These estimates range from \$23,000 to \$64,000 (in 1982 dollars); the range is much less than for the value of life. Again, assuming that those who enter high-risk activities (such as the drug trades) place a lower value on the risk of injury seems reasonable. However, the average injury severity for drug dealers may be higher than for workplace injuries. If the implicit value of injury is \$30,000 (in 1987 dollars), then the 7 percent risk may require a compensation of \$2100.

No literature on the valuation of prison time for deterrence purposes exists.³⁵ A simple assumption, consistent with (though not rigorously derived from) economic theory, is that dealers value freedom at the rate of forgone earnings; certainly we can reasonably assume that the more highly paid an individual, the more compensation he requires to incur the risk of prison.³⁶ If expected earnings are \$27,000 per year (mean net income of the regular dealer population), then, with the usual assumption of risk neutrality and full information, the necessary compensation for an expected four months in prison would be an additional \$9000.

If we make the calculation of compensating risks on the basis of a year of regular dealing, then the required compensations become \$10,500 for a 1.4 percent risk of fatal injury; \$2100 for a 7 percent risk of serious injury; and \$9000 for an expected prison time of four months (see Table 6.1). Note that these calculations assume the participants are fully informed of the risks. Recent reporting of the violence in the drug trades may justify that assumption for the fatality rate; the reiteration of the claim of turnstile justice makes such an assumption more questionable for the incarceration risk.³⁷

If these estimates are correct, then approximately \$20,000 of a regular dealer's annual earnings is attributable to the compensation he

Table 6.1

ESTIMATED RISKS AND NECESSARY COMPENSATIONS
PER YEAR OF REGULAR DEALING

Hazard	Number	Risk (%)	Compensation (\$)
Death	200	1.4	10,500
Injury	1,000	7	2,100
Incarceration ^a	3,000	22	9,000

^aEstimate of average time served is 18 months.

³⁵The issue is acute only for illegal markets, where price can play a role in providing risk compensation for participants; illegal markets have had less systematic study than have other criminal activities.

³⁶The correct valuation of his time may be earnings levels in the next-most rewarding activity after the one in which he incurs the risk.

³⁷Note, though, that adolescent dealers (presumably better informed than nondealers) perceived lower risks of arrest or imprisonment given arrest than did their nondealer peers.

demands for incurring the risk of imprisonment or of being the victim of a market-related killing. This figure does not take into account other kinds of risks to which sellers are exposed, such as arrest itself (with possible pretrial detention), seizure of drugs or assets by police, and/or theft of drugs or money by other participants. When we add these risks, risk compensation may well account for more than 80 percent of total earnings. The pure labor returns for dealers may indeed be not much different from those available to them in legal occupations. For an input of four hours per working day, the regular dealer obtains \$7000 plus a substantial quantity of free drugs, in addition to the earnings that pay for his acceptance of the various risks.

Again, we should note that our estimates are very rough, cobbled together from various sources and requiring numerous assumptions. The homicide rate for 1989 was 20 percent higher than in 1988. On the other hand, the number of drug arrests declined by some 20 percent. Estimates of time served based on earlier years may also not hold for the future. Our assumptions about the ratio of nonfatal to fatal injuries for weapons other than firearms may be too low. Thus, we should treat the final results as indicative rather than precise.

Nonetheless, these calculations constitute more than an academic exercise. Their purpose is not to attain precision about the consequences of increased violence in the drug trades or of longer prison terms for drug dealers, but to suggest that the high return to drug dealing has a reasonable explanation. This business is very risky. We may be impressed by the high incomes available to unskilled workers, but we should also be aware that these incomes are likely to be dominated by compensation for incurring rather formidable risks. Moreover, a substantial share of the risks are generated not by the actions of enforcement agencies but by the violence of participants.

Risk as an Entry Barrier

An alternative interpretation of the role of high risks in explaining high earnings is that these risks serve as barriers to entry for potential dealers. Given the high returns, why don't even more persons who earn modest hourly wages from legitimate activities enter into low-level drug dealing? Certainly a moral barrier exists—many persons are unwilling to earn their money from selling drugs that harm customers. However, other persons whose moral concerns with drug selling are modest may be unwilling to incur high risks of physical harm, as well as of incarceration, in return for \$30 per hour; they may require much higher pay than that even to consider entering the business.

Legitimate Employment and Risk

All this bears on the question of the extent to which improved legitimate work opportunities can reduce the supply of drug-selling labor. The possibility of earning more from legitimate employment might reduce willingness to sell, but with returns to drug selling created by the barrier of physical risks, the resulting decline is likely to be modest at best. One might reasonably ask whether even a substantial increase in hourly earnings—say, from \$7 to \$10—would much reduce current drug sellers' incentive to continue supplementing their wages with \$30-per-hour dealing. Legitimate employment might now yield \$1200 per month rather than \$800, but this would still leave those who are currently drug dependent with considerably less to purchase their own drugs.

This fact is important in discussions about how society can compete with the drug trades. Many commentators despair about how legitimate employment can possibly offer returns that can compare with those available from the drug trades. Nothing on the horizon suggests that young, low-skilled workers will generally be able to earn \$24,000 per year, let alone \$43,000.³⁸ Yet the above analysis suggests it may not be necessary to offer nearly that much in legitimate earnings to compete with such a risky activity as drug selling: An income of \$15,000 in a legitimate occupation with little risk may be competitive with \$40,000 from the very risky drug dealing.

However, that choice is likely to be reasonable only for those not yet drug dependent. The risks and hazards of drug dealing are unlikely to appear formidable for those who are consuming much of their income on drug consumption and for whom drug selling is the only means by which they can maintain that consumption; remember too that drug selling offers them access to drugs at lower prices. Only for younger cohorts of sellers and potential sellers making the choice to sell drugs without the peculiar needs created by drug dependency is the estimation of these risk compensation differentials relevant.

Much here depends on how poorly educated young urban males view risks of the kind associated with selling drugs. Some observers believe that risk, particularly involving physical violence or challenges to authority, is attractive to youths brought up in an atmosphere of despair and violence. If such is the case, then prospects are indeed bleak.

³⁸For this discussion, we use median rather than mean earnings of daily sellers because they represent what we may see as "typically" available to persons who enter the trade on a regular basis. If youth tend to optimism, however, the mean may be the more relevant figure.

If, however, risks of imprisonment and/or severe injury are deterrents, the prospects are more promising. That ninth and tenth graders in high-risk schools report strong disapproval of drug sellers as an occupational group is encouraging; this disapproval may facilitate the task of dissuading young males with poor job prospects from becoming drug dealers.

Possible Solutions

Society's options for reducing the extent of street drug selling are limited. Raising the risks of being a drug dealer by increasing the arrest or imprisonment rate is certainly one possibility. However, we have already noted that an increase in prison capacity is unlikely to occur within the next few years, while arrest risks already appear high for persons active within the street markets. Note, moreover, that in our calculations of risks faced by dealers, nonenforcement risks were very substantial. Death and serious injury resulting from the actions of other participants may be more important in determining both who participates and what they earn than are risks imposed by the criminal justice system.³⁹

Another control alternative is to increase the financial penalties facing dealers, a major thrust of the federal effort against high-level dealers. That the low-level dealers who are arrested in such numbers accumulate large financial assets that would be reachable through such seizure programs is not at all certain. The very uncertainty of these dealers' lives mitigates against long-term accumulation: The risks of death and incarceration make short-term conspicuous consumption particularly attractive. Cars and gold chains may be available for seizing, but automobile titles are readily held by others (friends and relatives), and gold chains probably get lost fairly readily anyway. Local police report that an effort to penalize dealers by seizing their cars was partly thwarted when targets acquired cheap second cars whose impoundment imposed little financial penalty.

In thinking about possible options, we must give attention to demand-side measures. Do any options exist that in the short run promise to reduce demand for these street dealers' services? We have said little in this study about demand; analysis of the criminal justice system records on drug offenders and collection of data from drug sellers is not an appropriate method for examining who buys drugs from

³⁹The two kinds of risks may be related; see Reuter (1989) for an argument that intensified street enforcement may increase the incentives for certain kinds of violence in the drug trades. However, most of the violence seems to have an internal market source.

sellers is not an appropriate method for examining who buys drugs from these sellers.⁴⁰ We have noted that persons charged with drug possession in the District of Columbia include a substantial proportion (42 percent) of nonresidents, of whom a substantial proportion are white (30 percent, compared to 5 percent of District residents). Drug-possession arrests, though, are likely to be such a small proportion of the customer population (even among those using these markets) and so much determined by police discretion that we can learn little about demand from examining who is charged with possession.⁴¹

If we accept that street dealers' high earnings are only explainable by the existence of a large middle-class market (as our data suggest), then exploring the desirability of sanctions against those who patronize the street markets is of considerable interest. Note that this rationale for imposing sanctions against street-market patrons is different from that offered recently by the Office of National Drug Control Policy (1989) for more general user sanctions. Ours rests on the social costs of attracting the young and poor into drug dealing and is specific to a particular class of patron. General user sanctions might achieve the same goal, but because they spread so much wider a net, they may do so less efficiently. The focus on street markets also provides a clear focus for enforcement tactics. With affluent buyers at risk of financial penalty and acquisition of criminal records (or even imprisonment), selling in street markets might be much less attractive.

Other, more covert markets might arise to replace them. Such markets may lack the efficiency and accessibility of the current street markets but may still provide most regular users with reasonable access to their drugs. They are, however, likely to involve a seller population that has more access to the users in their routine activities, such as work and leisure. The poor may thus be deprived of a major source of income. Given the costs to the poor community of the violence and diversion of talent from other activities—we can scarcely count this a loss.

The most desirable alternatives for reducing drug selling in the inner city—increasing the quality of life, and particularly of employment prospects, for young, poorly educated urban males—are obviously also the most difficult. But here we return to this section's earlier analysis.

⁴⁰Sellers in these markets are unlikely to have much information about their customers, many of whom appear to purchase without prior contact with the seller; indeed, this anonymity is one of the attractions of street markets.

⁴¹On the other hand, we might learn much about the consequences of implementing particular user sanction policies. For example, would withholding federal higher education benefits, as proposed in the 1988 Omnibus Drug Control Act, represent a significant deterrent to drug use, given the educational attainment of the population charged with drug possession?

The risks of drug selling are high—perhaps high enough that, if properly communicated to potential participants, modest improvements in legitimate employment prospects might make a real difference in the extent to which they participate in the trade.

Alas, even that limited claim has qualifications. The immediate consequence of improving the attractions of potential drug sellers' legitimate employment opportunities will be an increase in the price customers must pay for their drugs (since the opportunity cost of drug-selling labor has risen). If the demand for drugs is inelastic, it will increase total dealer income while perhaps having little effect on the number of persons active in drug markets. The availability of more attractive legal jobs may have more impact on future cohorts not currently involved either in regular drug use or in drug selling than on those now involved.

CONCLUDING COMMENTS

Our uncertainty about this study's policy implications reflects the relatively slight body of knowledge available on drug markets' role in urban economies. In this final section, we compare our findings to those of related recent research and make some suggestions about the path of future research.

Current Research

Though few systematic analyses of individual earnings from crime exist, the growth of the visible street markets in big cities has begun to generate some empirical research. We describe here the early results of that work, much of which is still in process.

New York City, where crack has been widely available since 1985 (compared to 1987 for Washington), has been the site of most major research efforts. Fagan and associates have collected data from a sample of 559 persons who use and/or sell crack, recruiting from the streets and using "snowball" techniques (no pun intended); participants are asked (and paid) to find other eligibles in their circles of friends and acquaintances. So far, the published analyses (Fagan and Chin, 1989a and 1989b) have dealt with paths of entry and the use of violence; these papers indicate that data on earnings were collected.

Philippe Bourgois, an anthropologist, is spending two years as a participant-observer among crack users and sellers in Harlem (Bourgois, 1989), collecting very detailed data on the lives and work of persons involved in the business (Holden, 1989). His primary concern is

with the effect of use and sale on the communities in which they occur, rather than with earnings.

Williams (1989) reported on a small group of predominantly Hispanic New York cocaine dealers in the mid-1980s. The ethnographic focus yielded few figures on earnings of participants but provided some interesting insights. First, even as the crack business was beginning (Williams's observations covered 1982-1986), cash earnings for lower-level dealers were surprisingly consistent with our findings of earnings—close to \$700 per week.⁴² Second, some of the more successful participants were able to quit, notwithstanding the incomes they generated and their own drug consumption. Those that survived, Williams suggests, came to appreciate the hazards of this life. This points to the importance of understanding career dynamics.

Other research, such as that being conducted by Jerome Skolnick and his students (Skolnick et al., 1989) in California, has focused primarily on the relationship of drug selling to gang involvement, a topic of particular significance in that state. It may also yield some insight into earnings and the relationship between jobs and drug selling.

To our knowledge, our study is the first to gather data on earnings and criminal careers from a sample of drug dealers recruited not through prior knowledge of their drug-selling activities, but through their presence in a particular component of the criminal justice system. It is a sample that excludes the tails of the distribution system. At one extreme, it will not include those who have risen high in the system (few in number anyway) or who have acquired a long record of convictions on drug dealing. Dealers of these groups will be more likely to receive prison sentences than probation. At the other extreme, it will underrepresent those who "dabble" in drug selling, since they are less likely to be arrested. Samples recruited through street contacts will probably have more success in reaching this second tail.

The results that emerge from the various research projects will undoubtedly reveal inconsistencies.⁴³ Differences in recruitment methods, the site, and timing of the study can have important effects. The populations involved in drug selling may be very heterogeneous;

⁴²For example, a wholesaler who purchased in one-kilogram units would sell each of his "crew leaders" some 125 grams each week on consignment. The going price for that quantity of pure cocaine was \$3000. The crew leader was expected to adulterate the cocaine by 50 percent and sell it, through his retailers, for \$6000. Of the gross margin of \$3000, one-third went again to the original wholesaler, leaving \$2000 to be split among the crew leader and his agents. Typically two or three agents made up the crew, implying earnings of \$500-\$700 per week to the lower-level participants.

⁴³Mieczkowski (1990) mentions just such inconsistencies in the implications of statements by enforcement agencies in Detroit, Kansas City, and New York with respect to the revenue generated by a kilogram of cocaine.

some dealers will be more successful than others. Recruiting study subjects from among persons at the bottom of the system (those most eager to earn money and attention from researchers) and using them to recruit still others may yield low estimates of income.

In some cities, dealers may face higher risks (aggregating across all sources of risk) than in others; dealer returns per hour may consequently be higher. Earnings may also be affected by the market's maturity: Persons who enter the market early may reap the returns available to pioneers in new and rapidly expanding markets in which experiential barriers to entry exist.⁴⁴ Studies from New York in 1990 may show lower earnings than those found by Williams among crack-market pioneers. The emerging body of relatively descriptive studies, including this one, require a much more well-developed analytic framework than is currently available before their results can be compared.

All this is relevant to the attractiveness of drug selling as an occupation. What may appear to be an exciting work option to persons not heavily involved in drug use in Washington in 1988 may be much less attractive five years later if the demand for drugs among the nonpoor continues to decline, as recent national household surveys suggest.

Future Research

Our analysis in this section has rested heavily on assumptions about attitudes toward risk in the population of young, urban minority males with poor earnings prospects. The basic assumption is that risk, whatever its form, is to be avoided. If risks associated with drug selling rise, the analysis assumes that some sellers will drop out or spend less time at it and the price of drugs will rise.

Yet what are risks to one set of persons are thrills to another. Katz (1989) argues persuasively that, at least for the most deviant young males, the risks of crime, particularly the physical risks, are a major attraction: "[M]aterialist theories refuse to confront the spiritual challenge represented by contemporary crime" (p. 318). Even if Katz is correct, we need to know the prevalence of this attitude in the population. If 1 percent of our target population's members can be so characterized, then although they present a serious problem, we need not despair about the possibility that increased risks will lead to diminution in drug-selling activity. If instead the proportion is 20 percent, then the problem of controlling the open distribution of drugs is much more difficult.

⁴⁴For a detailed explication of the dynamics of such markets applied to drug smuggling, see Cave and Reuter (1988).

This suggests the need for research on how male adolescents, particularly those at high risk of poverty, view risks of particular kinds. Further, how do they gain and process information about the risks and rewards of various activities? Such research can help provide insights into methods of communicating the more salient—and deterring—risks more effectively to persons most likely to become involved in drug selling.⁴⁶

A second line of critically needed research concerns the sources of demand for street-distribution services. Who purchases what quantities in these open markets? The role of user sanctions aimed at these markets is critically dependent on knowledge of the user population. What kinds of sanctions (asset seizure, loss of access to government programs, short terms of incarceration) are likely to be cost-effective for these populations?

Research of this kind is a slow business. Important results will be accumulated over years, not months. But if the drug markets persist on the current scale, such research will be a major contribution to learning how to prevent the continued flow of poorly educated males into a remunerative, violent, and destructive career.

⁴⁶Even within that group, heterogeneity that can be important for programmatic purposes is likely to exist. Some group members will be harder to reach than others; focusing resources on the more deterrable will thus make sense.

Appendix A

THE PRETRIAL SERVICES AGENCY DATA

The Pretrial Services Agency is the District of Columbia agency responsible for providing information to District judges on persons arrested and awaiting decisions about pretrial detention. Judges make bail decisions after reviewing the PSA's report on the individual. That report includes the arrestee's criminal history, information about his current status in the community and his education, and the results of a drug test.¹

Not every arrest in the District produces a PSA record at the time. Arrests the MPD disposes of at the precinct level without any referral to the prosecutor's office will not generally go through the PSA. Such arrests are dominated by minor offenses. A small percentage of arrests for more serious offenses may also not be entered by the PSA into its database if the arrestee is able to post a station-house bond before arraignment. If the individual involved in such an arrest is later brought into the PSA, that arrest will show up in his record.

The criminal justice system expunges some arrests from the record after a certain length of time. In return for a guilty plea for a very minor offense (for example, simple possession of marijuana), the prosecutor may agree to expunge the defendant's record if no further arrests occur within the following 12 months. In addition, because of a limitation on available storage space, some PSA arrest records are purged from the on-line system and stored on tape. However, the arrest's disposition, as well as other pertinent information, is maintained in the on-line record. The PSA also purges arrests that do not result in later charges. The number of expungements in the current tape appears to be approximately 1000. We have no information about expungements beyond the description of what kinds of charges might produce them. The tape contains 11,000 purged arrests; we have information on these.

The PSA tape has two types of records: a case record which includes information about all the individual cases and a great deal of processing

¹The PSA asks each person to provide a urine specimen, which undergoes testing for five drugs: opiates (primarily heroin), cocaine, PCP, amphetamines, and methadone. The test is voluntary; its results do not influence the determination of guilt. It has use only in assisting the court in making pretrial release decisions. For an account of this program, see Toborg et al., 1989.

information; and a person record, which tracks an individual (with pointers back to the case record for some kinds of information). The tape is of interest because of the relative richness of the information it contains about the individual's life circumstances. Information is available both on previous contacts with the criminal justice system and on schooling level. At the time of each PSA encounter,² information is collected by the agency about current residence and employment. The individual is asked to list his employer, current earnings, the nature of his job, and the period for which he has held it. The information is maintained for successive arrests; thus, we have observations at random points in time about the individual's employment history.

The PSA attempts, with the arrestee's consent, to verify current employment and residential information. It calls the employer and asks for verification of the information the arrestee provided. The arrestee may also provide the same information about his previous one or two jobs.

PROBLEMS

A major problem with the tape for research is that much of the information appears in narrative form (for example, job descriptions are uncoded). Moreover, fields are of variable length; numerical information (for example, hourly wage rate) may be in any of a number of locations within a field. Charges also appear narratively. Numerous coding errors exist (for instance, the Uniform Controlled Substances Act, which should appear as UCSA, often appears as USCA).

The quality of the previous criminal history information is unknown. It includes all arrests within the District criminal justice system; it aims to include arrests by other state and federal criminal justice agencies, but may miss some.

Cases frequently involve multiple and changing charges (for example, the arrest, indictment, and conviction charges may all differ). Even more points in the process exist at which the charge may be changed by prosecutors.

Defining District of Columbia Residency

Many arrestees record multiple addresses; one may be the current residence, another the address to which mail should be addressed, still

²Hereafter, for convenience, we shall refer to this as an arrest even though (as we noted previously) some arrests may not lead to a PSA encounter.

another the one through which the arrestee is most likely to be reached quickly. A person received a District resident code if (1) his latest recorded address was in the District, and (2) the record indicated that he had lived in the District area for at least one year.

We extracted the initial determination of residency from records of type "FC-PD, Address Information" on the PEOPLE file. We extracted the 2-character field called PD-ST (State) from the most recent address information record for each person. If the field contained the letters *DC*, we coded the person provisionally as a District resident.

We then used information from records of type "FC-PBD, Name Detail Information" on the PEOPLE file. We used the 20-character field called PBD-DCR (described as "D.C. Residency (F)" [two 10-character fields: steady or off/on residency]). We screened these two fields for "tokens" indicating long-term residency. An offender initially coded as a District resident using the address record was finally accepted by us as a District resident if either of the two 10-character fields contained any of the following tokens: LIF, YEAR, YR, SINCE, LIVE, YES. Typical cases we coded as nonresident using this approach were the following: UNK, UNKNOWN, 6 MONTHS, 1 DAY, VISITING, NONAREA. Of the 25,915 offenders coded as District residents, almost 69 percent were so coded because the field contained the word *LIFE*. Most others so coded contained the word *YEAR* (as in "2 YEARS"), but no single category accounted for more than 2 percent of the coded residents.

Defining Drug Charges

We extracted charges from the records of type "FC-CB Arrest/Grand Jury Information" on the CASE file. We scanned the 25-character narrative field CB-CHG for certain "tokens"—words or parts of words that suggested one or another charge. We used the variable CB-TOC to code whether the charge was a felony or misdemeanor.

We assigned each charge to the first possible category in the following ordered "severity" list (note that any drug charge is coded as "more severe" than any nondrug charge, not a usual procedure):

1. DRUG SALE OR DISTRIBUTION: Charge contained one of the following tokens: PWID, DIST.
2. DRUG POSSESSION: Charge contained the token POSS.
3. OTHER DRUG: Charge contained one of the following tokens: UCSA, USCA, COC, PCP, MARJ, MARIJ.

4. FELONY: CB-TOC was coded FL.
5. MISDEMEANOR: CB-TOC was coded MS.

For each offender, we defined the following six variables:

NC85: Number of charges in 1985.
DT85: Severest charge in 1985.
NC86: Number of charges in 1986.
DT86: Severest charge in 1986.
NC87: Number of charges in 1987.
DT87: Severest charge in 1987.

After observing that the OTHER DRUG category accounted for less than 10 percent of all cases and did not seem particularly informative, we combined it with categories 1 and 2 as follows: Any OTHER DRUG case also coded as a felony was included in the DRUG SALE OR DISTRIBUTION category. Otherwise, we included it in the DRUG POSSESSION category.

ESTIMATING COHORT SIZE

Because the young black male population is overrepresented among persons arrested for drug selling and drug possession in the District of Columbia, obtaining reliable estimates of the number of young black males residing in the District who were aged 17-29 in 1986 was extremely important. In particular, we sought estimates of the number in each specific cohort (that is, born between 1968 and 1957).

To estimate the number of black males in each age cohort who were aged 17 to 29 in 1986, we needed a three-step procedure. In the first step, we used 1986 estimates of the black male institutional and noninstitutional population provided by the District Government's Office of Policy and Planning. The District Government demographers use the "composite" (or "projections") method to estimate population by age, race, and gender. Data are unavailable for the black population alone, but are available for "black and other," which includes other nonwhite groups such as American Indians, Hispanics, and Asian-Americans. The sample sizes for these nonwhite groups are not large enough to produce reliable estimates. In effect, the "black and other" category serves as a proxy for the black population. To the extent that they include nonblack persons, our estimates of the risk of criminal charges for black males will be biased downward.

The District Office of Policy and Planning estimates population by having demographers begin with a figure for the population at a certain

point in the past. Next, to develop an estimate of what the group's size would be or would have been in some given year, the demographers apply known migration and mortality rates. As compared to local estimates prepared by the U.S. Bureau of the Census, the District Government's method has the advantage of incorporating knowledge about the local population—specifically about local migration patterns—in order to make reasonable estimates of what the population was in 1986. These estimates include the institutional population—such groups as soldiers living in barracks, prison inmates, and college students living in dormitories. The coverage thus obtained is more complete than that provided by the Census Bureau's estimates, which include only the noninstitutional population. Table A.1 shows these population estimates for the young black male population in the District by five-year age groups.

We distributed the number of black males in each of the five-year age groups to single years of age in accordance with the proportions we calculated based on the 1980 census. For example, if we know that in 1986 18,100 black males aged 15–19 (inclusive) were resident in the District and we also know that in 1980 15-year-olds accounted for 18.7 percent of the 15–19 age group, then we simply multiply 18,100 by 18.7 percent to arrive at our estimate of 3380 black males aged 15 in 1986. We assume that the age distribution of the young black male population in the District has not changed since the 1980 census.

Clearly this method involves several questionable assumptions. Nevertheless, given the paucity of current data on the young black male population in the District, we believe that our assumptions are reasonable and that we have used an estimation method that will allow us to arrive at reasonable estimates of this population.

Table A.1

BLACK MALES IN THE DISTRICT
OF COLUMBIA, BY FIVE-YEAR
AGE GROUPS, 1986

Age Group	Black and Other Males (in thousands)
15–19	18.1
20–24	21.8
25–29	21.4

SOURCE: District of Columbia
Government, Office of Policy and
Planning.

Appendix B

FIELD METHODS

OVERVIEW

This appendix documents the survey design, field operations, and data safeguarding protocols for the study's survey component, which we reported in Sec. IV. The data collection effort for the Income-Generating Crime Project had three purposes:

- To gather descriptive data on the roles and activities of lower-level drug distributors in the Washington, D.C., metropolitan area;
- To collect quantitative data on income and expenditures related to these dealers' drug-distribution activities;
- To gain insight into how the money obtained from these activities fit into the lives and careers of the study subjects.

The survey took place during the six-month period between July and December 1988. The sample consisted of drug distributors on probation in the District of Columbia. With the cooperation of the research and supervisory staff in the District probation unit, trained RAND interviewers screened 524 probation clients for study eligibility and completed 188 in-person interviews at three different probation-unit offices; 2 completed interviews were for the same respondent and were dropped from the analysis, so the analyzed sample consisted of 186 interviews.

SURVEY DESIGN ISSUES

Three factors led to the choice of probationers for the sample. These included the type and quantity of data being sought, interviewer safety, and the need to be able to validate at least some of the self-reported data.

Type and Quantity of Data

To capture the effect of drug-distribution income and activities on lives and careers, we wanted both past and current information from

the self-reports. To characterize the sample, we also sought information on past and current education, training programs, work history, and demographic factors. In addition, we sought information on expenditures related to living arrangements and drug-distribution activities.

Three issues were particularly salient:

- Because of the drug-distribution information's sensitive nature, we were concerned about our ability to obtain valid and reliable data while protecting respondent confidentiality and privacy.
- Because of the amount of information necessary, the interview would take a long time to complete and obtaining cooperation from respondents could become a problem.
- And finally, because sample members might have trouble filling out a questionnaire of this length and complexity themselves, it had to be administered by the interviewer.

These concerns had a major impact on survey design decisions—in particular, on the choice of institutional setting.

Selecting a representative sample from residents of the District was not a feasible option. We had designed the study to describe the activities, income, and expenditures of a narrow group within the community rather than to represent the activities of community residents as a whole, and to screen community residents on income from drug distribution was neither sensible nor operationally workable.

Related to the decision about settings for sample selection and interviewing was the issue of assuring interviewer safety and well-being without compromising the self-report data's reliability and validity. Concern for interviewer safety reinforced the decision to seek an institutional setting for sample selection rather than selecting the sample from the street or through sampling dwelling units in neighborhoods rich in drug dealers. Daily reports of violent drug-related crimes in many poor District neighborhoods were appearing in the newspapers, increasing fear for the safety of residents and passersby alike. Further, District police were conducting a series of highly publicized sting operations, thus increasing the probability of either an unacceptably high nonresponse rate or of obtaining unreliable and invalid data.

A probation-office setting met all criteria. It permitted ready access to the sample because clients had to report to the probation office on a regularly scheduled basis. At the same time, we could obtain an eligible sample more easily because the probability of capturing numerous low-level drug distributors (the population of interest) was high; the probation system was more likely than were prisons to handle non-

violent crime convictions, especially in Washington, D.C., where the local jail was strained to capacity.

Criminal History Records

Obtaining an independent means to test the validity of at least some portion of the self-report data was particularly desirable for this study because it collected information that could easily be subject to exaggeration, denial, or lack of recall. The probation client sampling strategy allowed us access to criminal history records for research purposes. Access to such records would have been difficult, if not impossible, had the study used a sample from the community at large.

The Adult Supervision Branch of the Social Services Division provided the study with two sets of arrest and conviction records maintained for internal use by probation officers and research staff. The data are derived from records maintained by the Washington, D.C., court system.

To protect clients from being identified as study subjects, the project submitted hard-copy requests for records by unique Police Department identification number (PDID) not just for study subjects, but for the entire sample of screened-out and completed clients. It also did so for an additional group of clients whose PDIDs were selected at random from the caseload management reports used by the study during stage 1 sample selection (which we describe below). As further protection, the project staff asked the Social Services Division to return to RAND the original hard-copy lists we submitted, without taking a photocopy. With its own rigorous privacy protections, the Social Services Division readily agreed to comply with ours.

FIELD TESTS OF QUESTIONNAIRE AND PROTOCOLS FOR OBTAINING INTERVIEWS

To assess how well our design decisions would work in the field, we conducted two pretests. The first took place in Los Angeles, close to RAND survey operations in Santa Monica; the second occurred at the actual interview sites in Washington, D.C.

The Los Angeles Pretest

The Los Angeles pretest was conducted over a two-week period in March and April 1988, some three months before the beginning of the survey's field period. Our principal objective in conducting a Los

Angeles pretest was to evaluate the questionnaire as a reliable instrument for collecting sensitive data before we attempted a larger, more structured, and more costly pretest in Washington, D.C. We also wanted to identify, before involving large numbers of agency staff in helping us establish study protocols, potential problems in obtaining cooperation from respondents in similar circumstances and with similar histories to those of the respondents we proposed to use as study subjects.

The L.A. pretest sample consisted of 23 probationers scheduled for supervision appointments between March 18 and April 6, 1988. These clients, along with all others assigned to the specialized gang unit where the interviews were to be conducted, had been identified as gang members by the court or a probation officer. Our probationers were considered suitable pretest subjects because they fell well within our eligible age span of 18–40-year-olds and were referred to the gang unit for such gang-related illegal activities of interest as drugs and robbery. Probationers in this unit ranged between 18 and 25 years of age and most had some drug involvement in their histories (either as users, sellers, or both), according to the probation officer in charge of their supervision. Because the L.A. pretest sample was small and could yield little objective data, we relied on feedback from a highly experienced interviewer to uncover any problems with administering the questionnaire and obtaining respondent cooperation.

Results

Of the 23 probation clients scheduled for supervision appointments, interviews were completed with 7 (30 percent). Twelve clients (52 percent) did not meet their supervision appointment, 4 others came at different times of the day or on a different day, and 1 client's driver could not wait for him beyond the time allotted for the supervision interview. Only two probationers (1 percent) refused to be interviewed.

Implications for the Washington, D.C., Survey

The L.A. results for the percentage of probationers who missed supervision appointments were confirmed by results of the Washington, D.C., survey; this information was factored into the sampling strategies we discuss later in this appendix. We also identified the following key issues that led to revisions in the questionnaire and to the development of methods for training interviewers for conducting the Washington, D.C., survey:

- We needed to add items to the questionnaire on the length of time respondents were on probation and their reasons for being on probation.
- During pretesting in Washington, D.C., we needed to obtain the distinct local terms used to describe various distribution roles and types of drugs.
- We needed to redesign drug-transaction questions to elicit information from respondents who were part of the distribution system but did not sell drugs. As part of this effort, we needed to train pretest interviewers to probe for and record verbatim transaction information whenever an opportunity arose.

FIELD ISSUES: IMPLEMENTATION OF SAMPLING STRATEGY

Implementation of sample selection occurred in three elapsed stages as the field period proceeded. Staging was a practical response to emerging opportunities for increasing the yield of eligible respondents—a chronic problem until the final two months. Staging did not affect eligibility criteria, which remained the same throughout the field period.

Stage 1: Sampling from Lists

The project had initially received permission to select respondents and conduct interviews at two of the four supervisory probation-unit offices run by the Social Services Division's Adult Supervisory Branch.

Adult clients supervised at each of these units were listed on caseload management reports, which were sorted by unit and updated by probation-unit personnel monthly. The report was used by Adult Supervision Branch research staff, probation-unit supervisors, and probation officers to identify active clients and monitor caseloads. Elements included in the report—such as sex, birth dates, probation entry and exit dates, charge codes, and type of charge (traffic, misdemeanor, felony)—allowed us to select clients who met the study's eligibility criteria. These criteria were as follows:

- **SEX:** Males
- **AGE:** Between 18 and 40 years
- **LENGTH OF TIME ON PROBATION:** Four months or less
- **TYPE OF CHARGE:** Misdemeanor or felony

We restricted the sample to males aged 18–40 because (as we saw in the PSA data) they constituted the vast bulk of persons charged with drug selling. By selecting respondents who had been on probation less than four months, recall problems for preprobation activities would remain modest. We excluded persons on probation for traffic offenses (such as driving while under the influence) because we judged them less likely to have been drug sellers.

The initial caseload management report we received contained a list of 3000 probation clients; this represented caseloads for both probation units. Of these clients, 305 (10 percent) met the study's eligibility criteria. We selected all eligible clients. We administered a separate screening interview to sampled clients when they came to their probation unit for their scheduled supervisory appointment. The screening interview verified eligibility on the selection criteria and also screened for Washington, D.C., metropolitan area residency and drug-distribution activity—two remaining participation criteria not explicitly indicated on the report. Conviction charges appeared in the caseload management report, but convictions on charges other than drug distribution did not preclude drug-distribution activity. Although place of residence did not appear in the report, clients in these units had to be District-area residents. Out-of-area residents were in another unit designated for non-District probationers.

Stage 2: Augmented Sample Selection in the Field

The second stage, which we initiated four weeks after the field period began, involved augmenting selections from caseload management reports with selections at interview sites. Because of the interval needed between report generation and sample selection, eligible clients scheduled for their first appointment would not yet have appeared on the report. Yet these new clients were likely to show up for the initial supervision interview, even if they failed to appear for subsequent ones. To increase the likelihood of including these clients in the study, we told probation officers the selection rules and then asked them to send to RAND interviewers (for screening and interviewing) any of their first-interview clients who met these criteria.

Stage 3: Intercept at Intake

Early in stage 2 sampling, the Adult Supervision Branch offered us an opportunity to add its intake unit as a sampling and interviewing site. Probation clients convicted of misdemeanor and felony charges came to this unit immediately after sentencing and had to attend a 15-

minute orientation session. Usually three or four orientation sessions took place each day; an average of ten individuals attended the sessions. Study interviewers were allowed to address clients at the end of each session. After explaining the study, interviewers requested study participation of all male clients between 18 and 40 years of age and then screened for study eligibility.

Stage 2 and stage 3 sampling added to our ability to interview probation clients whose chances of inclusion in the sample would have continued to diminish as they proceeded through the probation system from intake to first interview to ongoing supervision. These supplemental sampling strategies addressed the following operational issues that emerged during the early weeks of the field period.

Client Flow. An analysis of the status of the first month's selection indicated that less than half the clients had scheduled supervision appointments. The others were in different statuses—for example, 10 percent were in violation of probation, 10 percent had received split sentences where the jail portion of the sentence was still being served, and some 10 percent were in various other categories (such as telephone monitoring) that precluded their coming to the unit for an interview. Of the selected clients who had to appear for ongoing personal supervision, less than 50 percent came in for their supervision interviews. Moreover, only a relatively small number of new eligible clients who entered the system each month were assigned by probation officers to supervision at either one of the probation sites; this situation further reduced interview opportunities.

Respondent Recall and Sample Attrition. We predicated the initial sampling plan on our being able to interview the selected client within the first month or two after selection. The longer the interval between selection and interview, the less reliable the recall of events six months before probation, the reference period for capturing past drug-distribution activity. We were particularly concerned about recall for clients whose length of time on probation was nearing the four-month limit for study eligibility. We were also concerned about attrition for persons whose time on probation was about to end.

FIELD PROTOCOLS

Informed Consent and Interview Validation

Before administering a screening interview to determine study eligibility, interviewers explained the nature of the study, requested participation, and then read and explained the study's informed-consent form (see Fig. B.1). To protect privacy and confidentiality, respondents witnessed

7/15/88

**RAND STUDY ON WORK AND INCOME
INFORMED CONSENT**

WHAT THIS STUDY IS ABOUT

This study is about work, earnings and expenses of people on limited incomes. I understand that I will be asked about the different kinds of legal and illegal work activities I did during the 6 months before my current probation began. I will also be asked about the legal and illegal income I received and the expenses I had during that period. In addition, I will be asked some questions about legal and illegal work activities I did during the past 4 weeks.

WHAT HAPPENS TO THE INFORMATION I GIVE

I understand that the information I give will be used only for purposes of the research and for no other purpose. My answers will not be connected with my name or anything else that can identify me. The information I give will be regarded as strictly confidential and will not be disclosed or released unless I give my consent beforehand, except as required by law.

I understand that the study will also use information about me from records provided by the Department of Social Services. This information too will be regarded as entirely private and confidential, and will be used only for purposes of this research. My information will be put together with the information from other people who take part in the study and reported only as totals, averages and other statistics.

HOW I WAS SELECTED

I understand that I was selected by chance from lists of people on probation in the Washington D.C. area. The lists were supplied to the study by the District of Columbia Division of Social Services.

WHAT I WILL BE EXPECTED TO DO

I understand that by agreeing to take part in this study, I agree to complete an interview with a trained RAND interviewer who will read the survey questions to me from a questionnaire booklet. I also understand that everyone who agrees to take part will be asked the same questions. I can refuse to answer any questions in the booklet, as I wish, and this will not affect whether or not I can continue to complete the questionnaire. I also understand that I am entitled to receive \$15.00 in cash after I complete the interview.

Fig. B.1—The study's informed-consent form

-2-

MY PARTICIPATION IS ENTIRELY VOLUNTARY

I have been told that I can either take part in the study or refuse to take part, as I wish. I understand that DSS benefits I now receive or may receive in the future will not be affected in any way by my decision. I also understand that my probation will remain unaffected whether I take part or not.

WHO IS CONDUCTING THE STUDY

The study is being conducted by The RAND Corporation, a private, non-profit research organization based in Santa Monica, California. I understand that the Rockefeller Foundation is supplying the funds for the study, and that the study has the cooperation of the District of Columbia Division of Social Services.

I AM A WITNESS TO THE SIGNATURE OF _____,
INTERVIEWER SIGNATURE

who has signed his/her name to this document in my presence. I affirm that this person has read this document to me and has explained it fully, to my satisfaction. To protect my privacy, I understand that I am not required to sign this form.

SURVEY ID # ___/___/___/___/___

INTERVIEWER NAME: _____

INTERVIEWER ID# ___/___/___/___

DATE: ___/___/___

Fig. B.1—continued

the signing of the informed-consent form by the interviewer, rather than signing the form themselves. Because we did not obtain signatures, we needed another way to verify that the interviewer had obtained a valid interview. The field supervisor did this during stage 1 sampling by matching birth dates from self-reports with birth dates entered for each client on the caseload management reports from which we had selected the sample. We obtained most interviews during stage 2 and 3 sampling from clients screened by probation officers or recruited at intake rather than from lists. Therefore, we matched self-reported birth dates against birth dates obtained from criminal history records. We did not uncover any invalid birth dates through this method.

Screening by Interviewers

In addition to using the prior selection variables of age, misdemeanor or felony charge, length of time on probation, and gender (as we described above in the section on stage 1 sampling), interviewers screened respondents for study eligibility on the basis of whether they had

- Current Washington, D.C., metropolitan area residency;
- Residency in the Washington, D.C., metropolitan area sometime during the period six months before probation;
- Less than four months of institutionalization during the six months before probation;
- Received some income from drug-distribution activity during the six months before probation.

We excluded from study participation probation clients who did not meet all the study criteria. Of the 524 screening interviews we administered, 314 (60 percent) did not meet the eligibility criteria.

The breakdown of screening and study interviews by site appears in Table B.1. The frequency of clients screened out by particular items appears in Table B.2.

We screened out 219 (65 percent) of the 336 ineligibles because they said no to drugs—that is, they answered no when asked if they had earned any money, during the six months before probation, from making, selling, or helping others to sell any of the six drugs of interest (marijuana, crack, cocaine, PCP, heroin, and methadone).

We expected that a certain number of clients would be reluctant to answer this question truthfully, especially in a probation-office setting where they might feel they were putting themselves at risk by telling the truth. Clients who were mistrustful of the interviewer's purpose might believe that their information would be communicated to their

Table B.1

DISTRIBUTION OF ATTEMPTED INTERVIEWS AMONG SITES

Site	Completes		Ineligible		Total	
	#	%	#	%	#	%
Main	31	16	23	7	54	10
Field	19	10	27	8	46	9
Intake	138	73	282	85	420	81
Total ^a	188	100	332	100	520	100

^aPercentages may not total 100 percent because of rounding errors.

probation officer. We experimented with placing this screening question later in the interview, after rapport had been established, to see if we would have a better chance of obtaining accurate data and a completed interview.

During pretesting, interviewers asked 50 percent of the respondents the drug-distribution question about halfway through the interview schedule, as the first question in the section on illegal activity. They asked the other half this question as part of initial screening. Results indicated that to ask this question later on made little difference in clients' willingness to report whether they received income from drugs. People who were guarded about their drug activity did not answer affirmatively when they were asked the question later in the interview, even when they were willing to give information on their arrests and convictions. Operationally, placing the question within the screening interview rather than later in the questionnaire worked better. The probation client knew something about the interview's content and had time to come to terms with it while he was undergoing an interview about his present status, education, and work history—topics that came before the recent drug transaction section. At intake, interviewers were able to screen quickly and then interview only persons who were willing to give this information—an advantage in a setting where there was room for only two interviewers at any one time and where later appointments were neither feasible nor likely to be met.

Nonresponse Bias

Our ability to determine the refusal rate of eligible respondents was limited by several factors. First, at the field- and main-unit probation

Table B.2
REASONS FOR NONPARTICIPATION

Question Number	Item	Nonparticipants	
		#	%
1-1	Probation started four months before interview date	4	1
1-3	Was not a current District resident	2	1
1-4A	Did not live in the District at all during period six months before probation	2	1
1-6	Did not meet age criteria client was younger than 18 or older than 40 on last birthday	6	2
1-7	Spent three months or more in an institution during period six months before probation	65	19 ^a
1-8	Made no money from drugs during period six months before probation	219	65
(b)	Screened out, but screening item missing	10	3
(b)	Other status: Screening interview indicates eligible but interview not completed	18	6

^aIn general, these clients received split sentences; they served a portion of the sentence in jail and the remainder on probation.

^bNot applicable.

offices, supervising probation officers made the initial approach to the respondent. Because we did not want to increase the workload for our host sites, we did not ask probation officers to report systematically on their clients' refusals. Moreover, we did not want to give even the slightest impression that we were there to evaluate the probation officers' performance. This impression would have damaged our legitimacy in the eyes of those on whom we depended for success in the field. Therefore, we asked probation officers to cooperate only to the extent of requesting eligible clients' participation. Under these circum-

stances, no accurate assessment of the actual number of refusals at these probation units was possible.

We also did not systematically collect information on the rate of refusals at the intake unit. Some clients left after their orientation session without waiting to be screened; for these individuals, we obtained no information and could not compare them to our sample of screened clients. Clients who underwent screening could also indirectly refuse to participate—by screening themselves out on the drug-distribution item. Some (but not all) screened-out clients provided their PDID numbers. An analysis of their criminal history records shows that they did not significantly differ from the sample of interviewed clients in the number and type of arrests.

Actually, interviewers reported that self-screening worked both ways. Clients were often disappointed when told they were ineligible to participate and would reconsider their response to the drug item. As we reported in Sec. IV, criminal history records corroborated self-reported arrests on drug charges, indicating that the retraction was honest.

Table B.3 compares clients for whom we obtained completed interviews with screened-out clients on number of drug and nondrug arrests. We obtained criminal history records for all 186 interviewed clients and for approximately one-third of the 332 screened clients for whom we obtained no interview.

Respondent Payments

To encourage participation, we gave respondents \$15 in cash at the interview's end. We could not be sure that this amount would be

Table B.3

NONRESPONSE ANALYSIS: COMPARISON OF DRUG ARRESTS
FOR INTERVIEWED AND SCREENED-OUT PROBATION CLIENTS

Number of Arrests	Interviewed ^a	Not Interviewed ^b
Mean number of dockets listed	3.1	3.2
Mean number of drug-related dockets	1.4	1.6
Mean number of nondrug dockets	1.6	2.7

^aCompleted interviews - 186.

^bScreened-out clients - 101.

enough to make a difference in a client's decision to participate, given the kind of information we were asking about, the interview setting, and the large sums of money many active drug distributors handled during their transactions (even when they did not keep this money for long). In fact, the respondent payment was a very significant amount for some people, especially those interviewed at the intake unit. Some of these clients had just been released from detention or were completing the jail portion of their sentence; almost all had just come directly from court and had not earned income from any source during their period of detention, so they appreciated even small amounts of cash. The clients who were apprehended just as they were about to close a drug transaction probably owed money and were in the most immediate need.

During the Christmas holidays, in particular, the \$15 respondent payment was the deciding factor for reluctant probation clients who might not otherwise have bothered to participate. Some were even willing to wait around until the interviewer was free to conduct the interview with them. No one refused to accept the incentive, not even those who claimed large income from drug activities.

Implications of Variations by Site

We were aware that significant variations in site characteristics could potentially affect two aspects of the survey: interviewers' ability to obtain participation, and the validity of responses. In addition, variations in setting influenced field protocols for approaching, screening, and interviewing sample members and highlighted factors that might have affected client willingness to provide accurate responses to sensitive questions. Because the three sites differed in a variety of ways—physical size and appearance, location, formality, function, and, consequently, in field protocols—we consider each separately.

Main and Intake Units

Both the main and intake units had their offices in one of the superior court buildings, located in a gentrifying neighborhood within the District's northwest sector. The approach to the entrance was through either of two large parking lots, in front and in back of the building. A rectangular enclosure in the center of the lobby housed a guard station for security and information. Guards directed visitors and clients to an area at the opposite end of the lobby where a desk clerk recorded information about the visit's purpose and prepared pass slips. Elevators facing both sides of the building's back entrance provided the only

visible access to the upper floors. Elevator operators checked the passes for passengers other than staff before permitting visitors and clients to exit at their designated floor.

Main Unit. The main-unit office was situated along the main corridor on the second floor. The room number and unit name engraved on a plastic label were the only features that distinguished this unit's door from a dozen others on the same floor. Outside the entrance to the office, clients waited for their appointments in a small area containing several wooden chairs. Before clients entered the main-unit office, they had to record their name and time of arrival in a log book in the waiting area. Just inside the entrance, two reception desks flanked either side of the doorway at which a senior aide and a secretary usually presided between the hours of 8:00 A.M. and 4:30 P.M. daily (except for one hour at lunchtime, when the desk was unattended). Officers saw clients in their individual offices, which were generally just large enough to hold a standard-size desk, two chairs, and a filing cabinet.

During the early part of the study's field period, the main unit was experimenting with a change in the way cases were assigned to probation officers. In this experiment, clients were assigned to a team of probation officers rather than to individual officers and were seen by appointment by the team member the unit supervisor had assigned that day to supervision. The unit later switched back to assigning clients to the same probation officer for the sentence's duration. Clients the unit supervisor assigned to this unit for supervision could reside anywhere in the District's northwest sector or surrounding localities.

Intake Unit. This unit occupied a relatively small office on the third floor. A long wooden bench and some folding chairs stood around a small interior space where clients waited to be called for their orientation session or for an evaluation interview. All clients had to attend the 15-minute orientation. Clients who did not undergo evaluation before sentencing participated in the evaluation interview.

Each day had four scheduled orientations; they took place in an enclosed space adjacent to the waiting area. Chairs stood classroom fashion facing a steel desk and a chart easel. During the four months study interviews took place at this unit, a RAND interviewer was present at each session. At the session's conclusion, the RAND interviewer could explain the study and request participation. Interested clients then underwent screening and interviewing. If more than one client at each session was eligible, prospective respondents could wait in the outer area while another was being interviewed in the orientation room. Alternatively, another interviewer could escort a client to

the second-floor main-unit office and use office space made available to the study when free.

Field-Unit Site

The field unit was a much more informal place than its main-unit counterpart. Located in a low-income residential neighborhood in the District's northeast sector and housed in a recently renovated townhouse with an entrance directly off the street, this light and airy office occupied two levels of the three-story building. A youth unit occupied the upper floor; the ground-floor and basement-level spaces housed the probation unit. The building's entrance was through a wooden door that led directly into a small reception area divided from the rest of the floor by a wrought-iron railing. Large windows and an old-fashioned bentwood coat tree were visible from the waiting area.

The only totally enclosed office on the ground floor belonged to the unit supervisor, who used it primarily for meetings. The unit supervisor permitted RAND interviewers to use this office to interview clients.

That office housed the unit's watercooler, and probation officers were in the habit of coming in and out of the office for water throughout the day. During the time a study interview was in progress, the staff did not have access to the watercooler; this may have been a slight hardship for the staff. When interviewers were offered the use of a basement cubicle by the field-unit supervisor, they used that space first to avoid inconveniencing the staff.

Desks stood in a random pattern on the open floor; some were partitioned behind screens. A reception desk faced the waiting area, where visitors and clients checked in with a probation officer upon arrival. Cubicles in the basement were partitioned from each other by movable commercial screens. Radio music piped into the basement served as soundproofing and also contributed to the sense of informality.

Clients assigned to the field unit were supervised by individual probation officers. Unlike their main-unit counterparts, probation clients assigned to the field unit had to live or work in the neighborhood to be eligible for supervision at the field unit. Probation officers mentioned that they got to know their clients quite well during their supervision encounters and that some probationers would stop by to see them between supervision visits and bring their family members along.

Conclusions

Noneffect of Site Differences on Validity. We expected interviewers to obtain a higher response rate and a greater degree of validity

at the field unit than would be possible at the the main unit. We assumed that the setting's greater informality and the contact with the same probation officer would create a climate of greater trust. Reinforcing this impression were the visits between appointments of clients and their family members, as reported by probation officers and observed by study interviewers. When we compared responses for several key variables by site, we found small statistically significant differences between the main and field units only in two related variables: the mean monthly income from legitimate jobs, and drug-distribution activities (see Table B.4). Since main-unit clients lived in neighborhoods all over the city but clients supervised at the field unit

Table B.4
SITE EFFECTS

Items	Site		
	1	2	3
Number of respondents	28	18	140
Mean age	28	25	28
Mean highest grade	12	12	12
Percentage employed ^a	61	89	62
Mean monthly income from legitimate job (\$) ^b	1391	829	664
Mean monthly income from nondrug crime (\$)	33	67	271
Mean monthly gross income from drug distribution (\$) ^c	5226	820	3577
Selling frequency (%):			
Daily	38	35	38
Several days/wk.	42	47	38
1 day/wk. or less	19	18	24
Mean # arrests	4	4	4
Mean # convictions	2	2	3

NOTE: Unless otherwise noted, differences are not statistically significant.

^aMarginally significant difference: chi-square (2) = 5.26, $p < .08$.

^bStatistically significant difference: $F(2, 181) = 5.66$, $p < .005$.

^cStatistically significant difference: $F(2, 183) = 3.13$, $p < .05$.

were assigned to that site because they lived nearby, the difference in income is more likely a function of the differences in opportunities rather than a reporting bias.

Inability to Measure Effect on Participation Rates. Intake-unit client study participation depended on interviewer, rather than probation officer, intervention. At intake, interviewers reached as many as ten clients at a time at group orientation sessions; this was the most successful strategy for obtaining completed interviews. Most of the effort, therefore, was concentrated at that site over a longer period of time. As we saw in Table B.1, 138 (73 percent) completed interviews and 286 (85 percent) screening interviews occurred at the intake site.

Successful intake interviewing permitted us to intercept clients before their first supervisory appointment. After some three months, the field-unit supervisor felt that we had exhausted the possibility of obtaining interviews from clients selected during stage 1 sampling from lists. Therefore, interviewers concentrated their efforts at the intake unit and ended interviewing activity at the field unit approximately midway through the field period. Interviewers continued at the main unit longer only because both main- and intake-unit offices were housed in the same building and a private main-unit office was available as needed for interviewing both intake- and main-unit clients. Of the completed interviews, 16 percent (31) were conducted with clients under supervision at the main unit. Only 10 percent (19) of completed interviews took place at the field-unit site. Because main-unit interviewing occurred over a longer interval and procedures and opportunities were radically different at intake, we cannot draw conclusions about participation by site based on the number of completed interviews.

Probation Officer Effects on Participation Rates. As the field period progressed, interviewers discovered in conversations with main- and field-unit probation staff that some probation officers had reservations about asking their clients to participate in the RAND study. Although relations between RAND field staff and probation-unit supervisors and probation officers were always extremely cordial and professional, some officers felt that the study might be harmful to the local community, which was already getting a great deal of negative publicity about its drug problems. Others did not see any benefit to their clients and did not inform them about the study, or else informed them in such a way as to discourage participation. We cannot judge to what extent officer attitudes affected client participation.

Identifying Eligible Sample Members

A complicated process for identifying sample members to interviewers was necessary in order for us to meet confidentiality guidelines set by the RAND Human Subjects Protection Committee and comply with Social Services Division privacy constraints. This process evolved during the course of the field period; it corresponded with the sampling stages we described above. Further complicating matters were differences in setting, client assignment procedures, and unit functions at each site, all of which contributed to various adaptations.

As we mentioned earlier, during the first sampling stage at main- and field-unit sites, Police Department identification numbers of probation clients were selected from monthly caseload management reports. The Adult Supervision Branch staff blacked out names before they submitted reports to RAND. Because the study did not have client names, at this stage, interviewers depended on probation officers' intervention in requesting study participation of selected clients. Officers kept their files in alphabetical order and their appointment lists by client name. To assist us, they needed the list of selected clients sorted alphabetically by name, not just by PDID number. This was accomplished by returning the list of PDID selections to the research staff. They then matched names to PDID numbers and submitted the lists to main- and field-unit supervisors, who sorted them according to team or probation officer assignment.

To help probation officers keep track of the sample members, we provided index-size "RAND work and income study request for interview" cards with space to add the PDID number. Probation officers could attach these cards to client file folders for easy removal at the end of the supervision interview. Clients who agreed to speak to RAND interviewers received the card. Clients with cards were met by interviewers in the reception area and escorted to one or another of the private spaces offered to the study at each site. Interviewers attach these cards to completed questionnaires. A linked RAND-generated identification (ID) label replaced the card before completed surveys went to RAND for data processing.

This chain of stringent labor-intensive activities soon broke down and interfered with our ability to interview selected clients. Because many clients were scheduled for supervision only once a month and only some 60 percent of all clients met their appointments, the loss of clients who came in for supervision but were not interviewed because of some breakdown in procedures represented a serious setback to completing the target number of interviews within four months' time.

To increase the flow of study-eligible clients and relieve the burden on the probation-unit staff, we initiated stage 2 and 3 sampling. Stage 2 sampling included clients from the first supervision interview, along with clients we selected during stage 1. This procedure improved the interview hit rate while relieving probation officers of the necessity of consulting lists, identifying clients by name or PDID number, or attaching cards to file folders. Probation officers were free to ask participation of any client who showed up for an appointment and met sex, age, and misdemeanor/felony conviction criteria. We retained the use of index cards to identify potential respondents. This sampling procedure did not prove to be less systematic than prior selection from lists.

During stage 3 intake sampling, we obtained PDID numbers from documents clients had with them from their court appearances. Interviewers themselves recorded the respondents' ID numbers on the cards, attaching them to completed interviews for later removal.

Interviewer Effects on Survey Responses

Interviewers with experience working in difficult and demanding interview settings conducted the interviews. Four of the five interviewers who worked on the study were experienced in conducting personal survey interviews with Medicaid beneficiaries, recent immigrant, inmate, or inner-city youth populations. One less experienced interviewer completed only 5 of a total of 188 interviews before she dropped out of the study.

Because of their experience, interviewers were able to establish an environment of trust and confidence quickly with clients, despite settings that could easily undermine those efforts. After all, study interviews occurred in the very offices in which the clients' supervisory probation interviews took place.

Obtaining reliable and valid data from overly compliant intake clients took even more skill than obtaining quality data from reluctant probationers. Intake clients had just come from court, and some from jail—many were still greatly unsettled. Interviewers reported that some intake clients believed that the interview was a mandatory part of the orientation process. To obtain the trust of these clients, interviewers had to be particularly skillful in convincing them of the voluntary nature of participation. Without that trust, compliance might easily have led to inaccurate responses based on the misperception that the information they reported would become part of their probation record.

Interviewer Assessment of Reliability and Validity of Responses

Interviewers' overall assessment of respondent behavior (see Table B.5) tended to corroborate evidence of validity demonstrated by matching criminal history records with responses to questions on arrest and conviction, as discussed in Sec. III. Close to 70 percent of respondents were rated high on their response honesty. For respondent behavior factors ranging from cooperative to hostile, interviewers rated almost 85 percent as cooperative, 14 percent as suspicious, less than 1 percent as evasive, and none as hostile. We found no evidence of variations by site as measured by interviewer assessment of respondent behavior or internal validity measures, despite concern that differences in site characteristics would affect level of cooperation or introduce significant response bias (see section "Implications of Variation by Site"). Moreover, sensitivity analyses of responses to education, employment, occupation, and drug-selling activities did not show statistically significant variation by interviewer (see Table B.6).

INTERVIEWER RECRUITMENT AND TRAINING

Recruitment

We recruited ten interviewers, trained seven, and hired five. A field director with many years of experience directing surveys on social issues in Washington, D.C., supervised interviewers. We determined that five interviewers was the maximum number we could hire because

- The targeted number of completed interviews was low—in the 175 to 200 range. Although the project extended the field period to six months, we originally intended to be in the field

Table B.5

OVERALL INTERVIEWER ASSESSMENT OF RESPONDENT BEHAVIOR (Percent)

Respondent Behavior	High	Medium	Low
Honesty of responses	68.5	29.2	2.2
Understanding of questions	61.5	34.1	4.5
Ability to articulate responses	65.7	29.9	4.5

Table B.6
COMPARISON OF RESPONDENT ANSWERS TO
KEY ITEMS, BY INTERVIEWER

Items	Interviewer ^a				
	1	2	3	4	5
Number of respondents	37	5	77	60	6
Mean age ^b	26	28	27	29	24
Highest grade completed	12	11	12	12	13
Percentage employed	56	80	69	61	67
Mean monthly income from legitimate job (\$)	610	1817	916	713	248
Mean monthly income from nondrug crime (\$)	118	33	116	443	10
Mean monthly gross income from drug distribution (\$)	3609	5075	2438	4419	8122
Selling frequency (%):					
Daily	42	60	38	33	33
Several days/wk.	44	40	33	41	67
1 day/wk. or less	14	0	29	26	0
Mean # arrests	4	5	4	5	3
Mean # convictions	3	1	2	4	2

NOTE: Unless otherwise noted, differences are not statistically significant.

^aOne additional interview was conducted by the supervisor but is not included in the table to protect the anonymity of the respondent's answers.

^bStatistically significant difference: $F(5, 180) = 2.81, p < .05$.

some four months and to complete approximately 50 interviews per month. Because clients were assigned a day rather than a time to come in for supervision, both sites needed coverage all day, otherwise interviewers would miss an opportunity to interview a selected client. Privacy restrictions precluded obtaining addresses and telephone numbers.

- Space available for conducting interviews at any of the sites was limited to one, or at most two, private areas, thereby restricting the number of interviewers who could work at any one time.

- We did not wish to be an obtrusive presence at the probation-unit offices where interviews took place.
- Probation-unit office hours and appointment scheduling restricted the range, number of hours, and number of days available to RAND field staff for conducting interviews.

Offices were open from 8:30 A.M. to 5:00 P.M. weekdays. Typically, clients did not arrive before 9:00 A.M. Fewer clients showed up in the morning than the afternoon, although some variation occurred by site. Field-unit probation officers made appointments with clients for a given day rather than for a particular hour, with ongoing supervision scheduled on three days and first supervision appointments scheduled on the remaining two. Main-unit clients received scheduled appointments for a specific time Monday through Thursday. Until we began to interview first supervision appointment clients four weeks into the field period, RAND interviewers were able to work just three days a week at the field unit and four at the main unit. Given probation-unit appointment patterns, for more than one or two study interviewers at a time to cover a site would not have been efficient or appropriate.

With one exception, the interviewers were longtime District residents, with a mean age of approximately 35. Four were female and one was male; all were black.

From observation, probation officers appeared to be mainly female; intake and main- and field-unit supervisors were also female. Therefore, the project felt comfortable with its own 4:1 female/male field staff ratio. Long experience indicated that experience and training were more often than not the deciding factors in whether interviewers obtained participation and quality data.

Training

For this complex questionnaire and set of protocols for interacting with probation officers and clients, we scheduled five full days of classroom training and practice, two days of site visits, and a day of debriefing after one week of interviewing.

The issue of how to report and interpret data was a particularly sensitive and personal one for the study's field staff. Before interviewers could represent the study to probation staff and clients, they themselves had to be convinced that they would not be embarrassed by the study and that no harm would come to the community through the use of these data.

Because almost all field staff had lived in the District for many years and some had raised or were raising families there, they had a

large stake in the community's well-being and were themselves, as community residents, the object of much research and press attention. Terms such as *poor* and *underclass*, which appeared in the literature to describe both the local community and the population of interest, were offensive and aroused much resentment. A question-and-answer session with the principal investigator, who would be the primary user of the data, was necessary to assure the staff that the research was disinterested before they could support and represent the study to others.

That this issue came up so personally during training made a difference later on when probation officers expressed similar attitudes at the study's interview sites. Interviewers were able to identify with the officers' concerns and at the same time assure them that the study would in no way harm the community or their clients' interests.

Appendix C

REPRESENTATIVENESS, RELIABILITY, AND VALIDITY OF DEALER SURVEY DATA

As we documented in App. B, illicit drug sellers are a difficult population to sample and survey. Thus, we are unable to establish in a rigorous way the representativeness, reliability, and validity of our survey results. However, some modest tests were feasible; we describe them in this appendix. First, we compare our sample's characteristics with those of the PSA database. Second, we examine the extent to which our sample is biased because most of our respondents were dealers who had "gotten caught." Third, we discuss the correspondence between self-reported criminal histories and probation-unit records. Finally, we examine the internal consistency of respondents' self-reported illicit income estimates.

COMPARISON OF PSA AND DEALER SURVEY SAMPLES

Table C.1 compares the survey sample to the Pretrial Services Agency population of charged drug sellers, which we described in Sec. III. The PSA population is much larger, and, because it includes almost all individuals arrested and charged with drug selling and is not restricted to those who have been convicted and are currently on probation, it is arguably more representative of the drug-trafficker population in Washington, D.C.¹ The table entries are column percentages representing the distribution of each sample across age, race, education, and employment categories.

The survey sample closely corresponds to the PSA sample in terms of age, race, and employment: Both samples are fairly evenly divided among the 18-24, 25-30, and over 30 categories; both samples are almost exclusively black; and approximately two-thirds of each sample is legitimately employed.² However, our survey sample appears to be

¹Of course, even the PSA members do not include, as drug dealers, dealers who have not been arrested and charged for their drug dealing. Inasmuch as our probation sample provides data on persons who sold drugs but were not charged with distribution, it does supplement the PSA data on characteristics of drug dealers.

²Note that employment status had different definitions in the two data sets. A PSA individual was classified as unemployed if more than half the entries in 1985-1987 indicated he was unemployed. A survey respondent was classified as employed if he reported

Table C.1
COMPARISON OF PSA AND DEALER
SURVEY SAMPLES
(Percent)

Characteristic	PSA	Survey
< 18	2	(a)
18-24	40	37
25-30	27	29
> 30	31	34
Black	99	97
Nonblack	1	3
Employed	67	64
Unemployed	33	36
HS or GED	40	67
No HS or GED	60	33

NOTE: PSA - Washington, D.C., Pretrial Services Agency sample (District residents only). Note that probationers under 18 were ineligible for the survey sample.

^aNot applicable.

better educated than the PSA sample. We can offer several explanations for this discrepancy, although we are unable to reach any definitive conclusions. First, it might reflect a recruitment bias, with better-educated probationers having been more willing to participate in the survey; probationers with marginal verbal skills might have felt more uncomfortable with the prospect of being interviewed. Second, better-educated arrestees may have been more likely to be sentenced to probation, although we cannot test that hypothesis using the data at hand. At any rate, reported education levels had little or no relationship with self-reported criminal activities or income, so this characteristic of our sample did not likely bias our results to a significant degree.

employment at the time of the interview. Although some respondents might have become employed to fulfill a probation requirement, 75 percent of our respondents were recruited at intake. As we note in the text, the 25 percent who were already on probation (typically, for two months) were not significantly more likely to be employed.

EFFECTS OF SAMPLING DEALERS WHO "GOT CAUGHT"

Our decision to sample probation-unit clients raises the concern that our results might not generalize to drug dealers who are able to avoid being detected and arrested while dealing. Because all our respondents were on probation for misdemeanor or felony convictions, our sample omits dealers who have completely avoided the criminal justice system. However, bear in mind that we identified respondents as dealers using a screening interview; a drug-selling charge was not a condition for eligibility. Although the majority of our respondents (76 percent) were on probation for a drug-related offense, 16 percent (29 respondents) had never been arrested for any drug offense; moreover, 57 percent had been arrested for drug possession but never for distribution.

This variability in criminal histories allowed us to examine whether dealers who "get caught" selling drugs differ from dealers who do not. We compared three groups of respondents: those who had never been arrested for a drug offense (16 percent), those who reported at least one arrest for possession but none for distribution (57 percent), and those who reported at least one arrest for distribution (27 percent). We found no statistically significant differences across these groups with regard to their age, education level, major drug of sale, frequency of selling drugs, number of different drugs sold, gross or net drug income, or personal drug consumption. This finding suggests that our results probably do generalize to probationers who have never been arrested for drug offenses, although we cannot establish whether our results generalize to drug dealers who at one extreme never get arrested and convicted for any offense, or at the other extreme are convicted an offense deemed too serious for a probation sentence.

COMPARISON OF SELF-REPORTED CRIMINAL HISTORIES AND PROBATION-UNIT RECORDS

The portion of our survey dealing with criminal histories is the one area in which external, relatively reliable individualized data are available to validate respondents' self-reports. Specifically, the District of Columbia probation unit provided a computerized listing of each respondent's previous arrests—including dates, docket numbers, and criminal charges.³ However, this listing is often incomplete: Juvenile arrests are often omitted from the listing, and other arrests are expunged by court order. Moreover, in the survey interviews, time

³See App. B for a description of procedures we took to ensure these records' confidentiality.

constraints did not permit us to ask each respondent to list exhaustively each previous arrest by date and charges; instead, respondents received a list of charges and were asked whether they had been arrested and/or convicted—a less burdensome task. For these reasons, we did not attempt an exact one-to-one matching of the probation records with the self-reported criminal history data. But we did expect that, to the extent respondents were truthful and were able to recall their criminal histories, a reliable correlation between the two data sources would exist.

To assess this association, we examined the probation records for each of our respondents. These records consist of chronological listings of docket numbers, each of which represents a distinct arrest incident, with a list of one or more offense charges per docket. We counted the number of total listed dockets, as well as the number of dockets containing at least one drug charge. We found an average of 3.2 distinct docket numbers per record—significantly fewer than the average of 4.2 arrests reported by respondents ($t[186] = -2.47, p < .05$). Arrests deleted from the probation records, or the record system's failure to capture arrests in nonlocal jurisdictions, could account for this difference. Also, because we asked respondents to list arrests separately by criminal charge, our total survey count likely double-counts some arrests for multiple offenses. A more important indication of the self-report data's validity is that the total number of dockets was significantly correlated with the number of self-reported arrests ($r[153] = .37, p < .0001$).

An 80-percent agreement rate existed between the probation records and the self-reports as to whether respondents had ever been charged with a drug offense ($\text{chi-square}[1] = 45.26, p < .0001, \text{phi correlation} = .49$). Thirty-two respondents reported a drug arrest when none appeared in the probation listing, while only five failed to report any drug arrests when one appeared in the probation records. No significant difference existed between the number of dockets that included drug charges (mean = 1.6) and the number of self-reported arrests for drug charges (mean = 1.6) ($t[185] < 1, \text{not significant}$). These were significantly correlated ($r[153] = .43, p < .0001$).

However, some discrepancies between the probation records and the self-report data existed with regard to the nature of these drug charges. Specifically, when self-reports and probation records disagreed as to the classification of a drug arrest, it was usually because respondents classified as an arrest for drug possession what the probation records classified as an arrest for drug distribution. These disagreements are related to a puzzling inconsistency in the results we report in the main text. Note that although we categorized 30 percent of the sample as

being on probation for the sale or manufacture of drugs, only 27 percent of them reported ever being arrested for this charge (see Table 4.3).

In our interview, we specifically asked respondents, "Were you ever arrested for the sale or manufacture of narcotics or controlled substances?" However, for the entries in the final column of Table 4.3, we used an open-ended format to ask respondents, "What offenses were you charged with for this current probation?" Many respondents who said no to the former question reported charges such as "possession with intent to distribute" in response to the latter question; these self-reported charges accurately corresponded to the charge labels that appeared in the respondents' probation records. Although we categorized such charges as "the sale or manufacture" of illicit drugs, some respondents apparently did not share our interpretation. This finding suggests that we have probably understated somewhat the frequency of arrests and convictions for drug distribution in the main text. The probation records indicate that at least 54 percent of our sample had been charged at some point with drug distribution, sales, or manufacture, and that these respondents averaged at least 1.4 arrests for such charges.

Thus, the one area in which we were able to test the validity of responses with external data provides considerable comfort: Respondents generally seem to have been willing to report their past criminal histories fully and accurately. This finding is consistent with previous research using similar methodologies (see Chaiken and Chaiken, 1982, App. B; Petersilia, Greenwood, and Lavin, 1977, App. C; Reuter and Haaga, 1989, pp. 29-32).

INTERNAL CONSISTENCY OF SELF-REPORTS OF ILLICIT INCOME

Unfortunately, we know of no feasible way to obtain objective, independent data to validate self-reports of illicit income. Because we were concerned that recalling and reporting illegal income might be difficult for respondents, we asked about it in different ways at different points in the interview.

In addition to the questions assessing drug-related income during the target period (which we described above in the text), we also asked respondents to estimate their earnings for each drug per active week of selling in order to derive a second estimate of monthly income from drug selling. Because many respondents did not sell a given drug every week, we had to discount these amounts accordingly. To do so, we

asked respondents how many of the 26 weeks of the target period they actively sold each drug; we divided this amount by 26 and multiplied the resulting discounting fraction by the reported weekly amount. After totaling across drugs for each respondent, we multiplied the result by four to place it on a monthly metric.

This alternate estimate of gross monthly drug income was modestly correlated with the estimate that appears in the main text: $r(186) = .39$, $p < .0001$. The median for this alternate estimate was \$1538—some 15 percent higher than the first estimate. The mean value was \$9077, with a standard deviation of \$24,274—more than two times higher and four times higher, respectively, than those of the first estimate. These differences were partly attributable to extreme skewing in the alternate estimate, which may have occurred because respondents described their most profitable week, rather than a typical week.

We obtained a final estimate of total criminal income near the end of the interview, when we asked respondents to report their total monthly income from “illegal sources such as fencing and selling drugs” during the target period. Responses to this item had a median of \$1800, with a mean of \$6451 and a standard deviation of \$13,821. This mean was only marginally larger than our estimate of mean total gross criminal income, \$4521 ($t[185] = 1.88$, $p = .07$). Moreover, this item was more strongly correlated with the estimate of drug-related income we reported in the text ($r[181] = .60$, $p < .0001$) than it was with the alternate estimate we described above ($r[181] = .36$, $p < .0001$). We reported the first estimate of the drug income in the main text and used it in subsequent analyses because of this convergence and because the alternate estimate was based on too many error-prone computational steps. Nevertheless, we repeated our analysis of correlates of drug income using the alternate estimate and found a very similar pattern of results. Thus, the drug-income figures we reported in the main text may be underestimates, but the alternate estimates would not alter our conclusions here about the correlates of drug income.

Appendix D

INCOME GENERATED BY PROPERTY CRIME

INTRODUCTION

Property crime plays two roles in our analysis. First, the income it generates may importantly support the market for drugs; certainly this has historically been true of the heroin market, as we discussed in Sec. II. An estimate of total earnings from property crime can help illuminate sources of demand for drug markets. Second, property crime is a traditional source of income, particularly for some young poor urban males, and thus competes with drug selling for their labor. To assess the economic significance of drug distribution to the same group, an estimate of the totality of this group's earnings from property crime is useful; we lack the data for developing estimates of individual earnings available from theft.

This appendix's aim is to estimate the income generated by theft or property crime¹ in the Washington metropolitan area. We estimate that total income from property crime in 1987 was \$140–\$227 million, most of which was generated by shoplifting. We cannot systematically determine the share of this income going to specific population groups—in particular, to groups otherwise in poverty—but using previous research and expert opinion, we suggest that for this population, the total income from property crime is \$77–\$133 million. This is a preliminary to evaluating the relative economic significance to the poor of earnings from drug sales. The remainder of this appendix describes the methods and data we used to generate these estimates.

METHODS

To make our estimates, we had to rely on various slightly ill-matched data sources. Some were local, others national; some were generated by well-grounded administrative systems, others by informal statements of knowledgeable observers.

The ideal measure of total gains from property crime would be average earnings per participant multiplied by the total number of participants.

¹We define property crime as the involuntary transfer of assets from one individual or organization to another individual. Examples are robbery, burglary, and shoplifting.

Researchers have estimated individual earnings by two methods. A few studies present direct interview data on earnings from property crime; each study was based on a sample of a narrowly defined subpopulation of the criminally active population. Johnson et al. (1985) interviewed a sample of heroin users (predominantly Hispanic) in New York City, while Chaiken and Chaiken (1982) collected data from a sample of prisoners in California, Michigan, and Texas. As we discussed in Sec. I, Viscusi (1986) analyzed self-reported criminal income for a sample of young black males in three cities. None of these studies have had sampling frames that permitted estimates of total income from the activity because they could not estimate the number of participants.

Cobb (1973), Krohm (1973), and Sesnowitz (1973) developed indirect approaches to estimating individual earnings. These researchers used the reported value of stolen property to estimate individual earnings, subject to two general adjustments: upward, to account for the non-reporting of many crimes, and downward, to account for the almost invariable reselling of stolen goods at less than replacement cost so that the income generated (with the exception of cash) is something less than the good's market value.

Previous research has not attempted to estimate total property crime earnings, either for the whole population or for a defined subpopulation;² in particular, no study has addressed this activity's relative economic significance for poor persons. Studies generally assume that most property crime income is generated by persons from low-income areas stealing from residents of nonpoor areas (Mathieson and Passell, 1976; Sjoquist, 1973), even though most victims³ are poor. Estimating the prevalence of crime in a population requires self-reports on particularly sensitive behavior.

In general, the returns from property crime suggested by previous studies are quite low; property crime does indeed seem to be a "mug's game." Johnson et al. (1985) report annualized income from property crime (in 1980) of less than \$8000 for daily heroin users. Katz (1989) suggests that the fruits of at least some of these crimes (such as robbery) come from the psychic pleasure of power the participants feel rather than from the financial yields.

²Cobb (1973) and Krohm (1973) do estimate total earnings from specific classes of crime (theft, burglary) for the communities they studied.

³Though most victims are poor, the average earnings are much higher for incidents of theft from the nonpoor. For shoplifting, the issue of which income group is victimized is particularly difficult to resolve. The immediate victims are businesses, but the costs are passed on to customers. If the costs of shoplifting and shoplifting prevention (guards and other protection) are higher for stores in poorer neighborhoods, the poor are again disproportionately victimized; that victimization may include reduced availability of retail outlets.

ESTIMATING INCOME FROM PROPERTY CRIME IN WASHINGTON

We can develop two kinds of estimates of the income generated by property crimes in a given area: offender-based or transaction-based. For an offender-based estimate, we first develop an estimate of offenders' average earnings per year, then multiply that figure by an estimate of the number of active offenders in the area. We have already suggested the difficulties of counting the number of offenders.

However, official data lend themselves to our developing a transaction-based estimate. For this type of estimate, we begin with an estimate of the total number of property crimes committed in the metropolitan area and multiply that by an estimate of the average income obtained from each crime. A large portion of property crimes get reported⁴ by victims; these data are recorded by police agencies. Local police also collect data on the value of goods lost in crimes that are reported; often, this is a requirement for insurance claims. In addition, several surveys have provided information about the reporting behavior of individuals and businesses victimized by crime, thus permitting estimation of the probability of an individual offense being reported. Resale value to the thief (which depends on the stolen property's nature) is based on expert judgment. Developing a case- or incident-based estimate for property-crime income is possible because police departments collect most of the necessary data by regular, uniform methods.

The task, then, is to construct an equation based on the number and value of reported property crimes (taking into account the reporting and resale factors) to produce the total income generated for the area. The FBI's Uniform Crime Reports⁵ serve as a starting point for categorizing the crimes we will include in such a calculation. Using the UCR's definitions, we will calculate separate estimates of income for the following crimes: robbery, burglary, larceny, and motor vehicle theft. Shoplifting, which technically falls under the category of larceny, will receive separate treatment because of the extreme difference

⁴Reporting rates are much lower for illegal market transactions. No participants have an incentive to report routinely the existence or scale of a transaction. Though victims of such transactions may exist, their victimization is indirect and provides no information about income gained in transactions. Hence, our estimate of total income from drug sales must rely on participants' voluntary reporting.

⁵The UCR is a uniform reporting system administered by the FBI. In 1987, 10,616 state and local law-enforcement agencies participated in the program, covering an estimated 202 million people. All Washington metropolitan-area jurisdictions participate in the program.

in reporting rates and the difficulty in determining the value of the stolen goods.⁶

Note too that we make no estimate of the income generated by white-collar crime (Geis and Meier, 1977). Such crimes are committed by persons in the course of their occupations; they do not involve the use of force or violence and go largely undetected. The lack of systematic data on the prevalence of such crimes precludes development of an estimate of the income generated (Biderman and Reiss, 1980). The prime beneficiaries are likely the nonpoor, given that opportunities for white-collar offenses seem to be positively correlated with education.

Calculating the Number of Crimes Committed

The UCR collects data on the number of crimes reported to police. Because not all victims report crimes to the police, the UCR underestimates the number of crimes that actually occur⁷ and we must make adjustments to account for the unreported crimes. The total number of crimes committed is the product of the total reported to police (P) and the inverse of the rate (r) at which citizens report the crime (total crimes committed = P/r).

The number of property crimes reported to the police is readily available.⁸ Determining the rate at which crimes get reported is a more complicated matter. Researchers have written a great deal on this topic. Most studies point to a surprising lack of variation across different population groups in reporting behavior. For example, Laub (1981) compared reporting rates across rural, suburban, and urban settings and found no significant differences. Skogan (1981) reported that when incidents are controlled for their seriousness, no major race differences in reporting exist.⁹ However, Schneider, Burcart, and

⁶We will not consider arson. Although arson for profit is a major social problem, it generates modest income. Moreover, the primary beneficiaries are the (predominantly nonpoor) property owners hiring the arsonist.

⁷Some thefts—most notoriously of motor vehicles—are initiated by the supposed victim as a fraud against his insurer. The victim shares the profits with his thief/agent; the insurer is the actual victim. This situation does not lead to an overcount of the number of crimes, but merely to misclassification of some crimes; they appear as motor vehicle theft rather than insurance fraud.

⁸Available data on property crime for the Washington metropolitan area include both "attempted" property crimes and completed property crimes. To that extent, the number overstates somewhat the number of completed crimes. The 1985 Washington victimization survey revealed that less than 8 percent of the household larcenies reported to the police were attempted crimes.

⁹Skogan actually found that black victims report some types of crimes at a higher rate than do whites, but that this difference is partly explained by black victims' being involved more often with crimes that involved a weapon or physical harm.

Wilson (1976) concluded that the probability of a victim reporting an offense is positively correlated with victim perceptions of the probability that police will catch and convict the criminal. Skogan (1984) summarized some other issues affecting the rate at which crimes get reported to the police. Most of the difference in reporting is explained by the characteristics of the crime itself. A completed crime is more likely to be reported than an attempt. As relative monetary loss (that is, the loss compared to the victim's income) increases, so does the reporting rate. A corollary to this relationship is that victims are more likely to report insured losses; often, filing a report with the police is a condition for claiming from the insurer.

The National Crime Survey (NCS) provides information on victimization and reporting rates for the entire country. The NCS researchers interview a sample of households about their victimization experiences and which of those experiences they reported to the police. Cox and Collins (1985) compiled a report for the years 1977-1981 on the reporting experiences of residents of the Washington standard metropolitan statistical area (SMSA). Table D.1 presents rates of reporting by individuals for the Washington metropolitan area for this period, as well as the reporting rate for the country for selected years. Cox and Collins found that the differences between the Washington SMSA reporting rates and the national estimates were not statistically significant (1985, p. 26). For the purposes of estimate, then, we will use the national rates of reporting victimization from the 1987 NCS as a proxy for metropolitan-area reporting rates. Because the NCS no longer includes crimes committed against commercial establishments, we will use a different, higher rate of reporting based on data collected in the 1970s.¹⁰ The NCS also uses slightly different categories of crimes than does the UCR. For example, the NCS divides larceny or theft into household larceny, personal larceny with contact, and personal larceny without contact. When comparing these reporting rates to the categories used by the UCR, we have tried to match them as closely as possible.¹¹

¹⁰The Bureau of Justice Statistics last conducted a survey on the victimization of commercial establishments in 1976. For the years 1973 to 1976, businesses claimed to have reported between 86 and 91 percent of the commercial robberies and between 75 and 82 percent of the commercial burglaries (Bureau of Justice Statistics, 1986, p. 230).

¹¹We will use personal larceny with contact to approximate the reporting rate for purse snatching and pickpocketing. We will use personal larceny without contact with UCR-reported larcenies that occur outside of buildings (that is, items stolen from automobiles, bicycles, and so on). We will use the household reporting rate with all other larcenies.

Table D.1

**COMPARISON OF VICTIMIZATIONS REPORTED TO THE POLICE,
WASHINGTON METROPOLITAN AREA VERSUS
THE UNITED STATES, SELECTED YEARS
(Percent)**

Victimization	Washington Met. Area 1977-1981	United States 1977-1981 ^a	United States 1987 ^b
Robbery	58.0	55.0	56
Personal larceny			
W/contact	29.1	36.6	33
W/out contact	28.3	25.0	27
Household burglary	51.6	49.2	52
Household larceny	28.8	25.8	28
Motor vehicle theft	73.2	67.7	73

SOURCES: Cox and Collins, 1985; Bureau of Justice Statistics, National Crime Survey, 1987, 1988.

^aNational Crime Survey average.

^bNational Crime Survey.

Average Income Realized from a Completed Crime

The UCR records the value of stolen goods when a crime is reported to the police. Therefore, for the subset of completed crimes reported to the police, calculating an average value is possible. We use that value for all losses in a particular category, including those unreported. Given that crimes of higher value will be reported at a higher rate, our estimate of the average value of a completed crime should be biased upward.¹² Table D.2 presents the mean value associated with crimes committed in the Washington metropolitan area in 1987 based on data from three jurisdictions: District of Columbia, Fairfax County, and Montgomery County. Together, 1.8 million of the area's residents live in these three jurisdictions. In 1987, these three police departments accounted for 59 percent of the metropolitan area's reported robberies, 58 percent of the burglaries, 60 percent of the larcenies, and 49 percent of the motor vehicle thefts.

The estimated average value of crimes committed in the Washington metropolitan area is close to the national average. The major exception is commercial robbery, for which the average loss is much higher in Washington.

¹²Note that the distribution of losses from any particular crime is highly skewed; a few high-value losses dominate the mean, which is much higher than the median or "typical" loss.

Table D.2

AVERAGE VALUE REPORTED PER PROPERTY CRIME,
WASHINGTON METROPOLITAN AREA^a
ESTIMATE AND NATIONAL, 1987

Crime	Washington Met. Area ^a		National
	Number	Avg. Value (\$)	Avg. Value (\$)
Robbery			
Commercial ^b	609	1,998	869
Noncommercial	5,065	429	561
Burglary			
Residence	11,949	1,148	1,004
Nonresidence	8,591	823	914
Larceny			
Pers. w/contact	2,167	164	261
Pers. w/out contact	31,290	260	340
Other ^c	22,279	654	609
Motor vehicle theft	11,130	4,886	4,964

SOURCES: District of Columbia Metropolitan Police Department; Fairfax County Police; Montgomery County Police; FBI Uniform Crime Reports, *Crime in the United States, 1987*.

^aCalculated from data for the District of Columbia, Fairfax County, and Montgomery County.

^bCommercial robberies include robberies from commercial entities such as gas stations, convenience stores, and banks. All others are included under noncommercial.

^cOther larceny includes thefts from buildings, coin-operated machines, and larceny not classified elsewhere.

The NCS produces estimates of average loss as well. It asks victims to estimate their loss resulting from completed crimes, including victimization costs other than property loss. From these data, we can make some rough calculations of the values. Using information from the 1985 victimization survey, we see that the average economic loss resulting from a burglary (household) was \$445; from a larceny, \$256; and from a robbery, \$258.¹³

¹³Data on the total economic loss to the victim resulting from a crime appear in the Bureau of Justice Statistics' *Sourcebook of Criminal Justice Statistics 1987* (p. 178) by ranges (for example, greater than \$49 and less than \$100). We used a midpoint value to represent the average value of losses within a particular range. For responses of "less

We should not interpret this estimate of a committed crime's mean value as income. We must apply a discounting factor to account for a thief's not realizing as income the stolen goods' full value. The burglar who steals a \$250 television set may be able to fence it for only \$25. We assume the fencing rate to be different for different crimes, since each type of crime involves a specific distribution of the various kind of goods. Burglary and larceny often involve televisions, stereos, jewelry, and automobile parts. Thieves usually fence these items for substantially less than their declared value (perhaps only 10-25 percent). Unrecovered motor vehicles may generate less than 10 percent of value. For example, an undercover sting operation run by the District of Columbia's MPD purchased 119 autos over a one-year period, paying an average of \$307.¹⁴ The average reported value of a car stolen in Washington in 1987 was more than \$4000.

At the other end of the scale, we would have to discount the value of goods stolen in robberies less; robberies usually involve cash and credit cards, and sometimes jewelry. Although credit cards and jewelry will not generate as much income as their declared value, cash of course will not be discounted. Given that the discounting factors vary widely and are not well studied, we will use a range of rates for the different crimes to provide a plausible range of total income.

We can then enter all the elements in the following equation:

$$\text{Income from property crime} = [(\text{crimes reported}) / (\text{reporting rate})] \\ * [(\text{avg. value per type of crime}) * (\text{discounting factor})]$$

Table D.3 applies different discount rates to the average values calculated in Table D.2 to produce high and low average-income estimates for different types of crimes.

The range these rates represent is not unreasonable, given what little information is available about fencing factors.¹⁵ We assumed that for crimes other than robbery or motor vehicle theft,¹⁶ the thief must sell most of the stolen goods before realizing any income. With regard to the crimes of robbery and personal larceny with contact (purse snatching and pickpocketing), we assumed that most of the take would be currency. We also assumed that a commercial robbery would net a

than \$50," we used a value of \$50. For responses of "\$500 or more," we used a value of \$1000. The total economic loss may include costs other than lost property, such as medical expenses or property damage.

¹⁴*Washington Post*, Feb. 23, 1988.

¹⁵Cobb (1973) used discounting factors that ranged from .12 to .20 for stolen property other than currency. He based his estimates on interviews with police and one fence who operated in the study area.

¹⁶A substantial share of motor vehicle theft is on commission—that is, the thief receives some fee in advance of the theft itself.

Table D.3

HIGH AND LOW ESTIMATES OF AVERAGE INCOME REALIZED
FROM DIFFERENT TYPES OF PROPERTY CRIME

Crime	Avg. Value (\$)	Discount Factor		Avg. Income	
		Value	High	High (\$)	Low (\$)
Robbery					
Commercial	1998	.75	.50	1499	999
Personal	429	.50	.30	215	129
Burglary					
Residence	1148	.25	.10	344	115
Nonresidence	823	.25	.10	247	82
Larceny					
Pers. w/contact	164	.50	.30	82	49
Pers. w/out contact	260	.25	.10	65	26
Other	654	.25	.10	164	65
Motor vehicle theft	4886	.20	.10	977	489

higher proportion of negotiable currency than would a personal robbery.

These income estimates are higher than the self-reports of income per crime from interviews with heroin-using offenders. Johnson et al. (1985) interviewed almost 200 New York heroin addicts about their criminal activities in support of their habits. The mean reported cash income from a robbery was \$80; burglary netted an average of \$81, and other larcenies reportedly produced \$36 on average (p. 232). The difference may result from the very high rate of theft by heroin users, who cannot be as selective among targets or fences as are offenders whose income needs are less urgent.

The unique nature of reported motor vehicle thefts necessitates one final adjustment. A large proportion of the cars reported stolen are recovered relatively quickly after the report is filed. In the three jurisdictions that provided detailed data, police recovered 63 percent of the stolen vehicles' value. This recovery rate compares with 8 percent for all other goods. We assume no income to the thief when a vehicle is recovered, and that the theft was for joy riding or simple transportation purposes; thus, we estimated that only 37 percent of the reported thefts generated income.

By combining figures from the previous three tables, we can estimate a range of the amount of income generated by property crime (excluding shoplifting). As Table D.4 shows, this income ranges from \$29 million to \$66 million, depending on assumptions about the fencing factor for different kinds of goods.

RETAIL THEFT AND SHOPLIFTING

Estimating income realized from shoplifting requires an approach different from the incident-based method, primarily because of the difficulty of estimating how many shoplifting events occur. Victims occasionally report shoplifting incidents to police, but usually only when they observe and apprehend a suspect. Most incidents are, in fact, never detected, let alone reported. Thus, police statistics severely underestimate the number of completed crimes, and we know too little

Table D.4

HIGH AND LOW ESTIMATES OF INCOME GENERATED BY
PROPERTY CRIMES (EXCLUDING SHOPLIFTING),
WASHINGTON METROPOLITAN AREA, 1987

Type of Crime	UCR	Reptg. Rate	Est. Number Committed	High Est. of Income (thousands of \$)	Low Est. of Income (thousands of \$)
Robbery					
Personal	8,551	0.56	15,270	3,275	1,965
Commercial	1,025	1.00	1,025	1,535	1,024
Burglary					
Residence	20,651	0.52	39,713	11,398	4,559
Nonresidence	14,832	0.90	16,480	3,391	1,356
Larceny					
Pers. w/contact	3,637	0.33	11,020	904	542
Pers. w/out contact	52,368	0.28	189,740	12,333	4,933
Other	37,402	0.28	134,664	22,018	8,807
Motor vehicle theft (unrecovered)	22,767	0.73	11,540 ^a	11,277	5,638
Total	(b)	(b)	(b)	66,130	28,825

SOURCES: District of Columbia Metropolitan Police Department; Virginia State police, Maryland State police.

^aAdjusted for nonreporting (0.27) and for recovery (0.37).

^bNot applicable.

about reporting behavior to make a systematic calculation here of the total number of incidents, using reports as the base. The alternative is to use accounting conventions to estimate lost merchandise (called "inventory shrinkage") and then assign some portion of that loss to theft.

Calculating Shrinkage

Inventory shrinkage can result from poor inventory control, employee theft, or shoplifting. Nonfood retailers have generally used a figure of 2 to 2.5 percent of sales as a rough estimate of shrinkage. Food retailers estimate 1 to 1.5 percent. The International Mass Retail Association contracts an annual survey of retailers and the results support these estimates (Arthur Young, 1988). Determining whether these rules of thumb represent a product of "mythical numbers"—numbers cited once and then accepted as gospel thereafter (Singer, 1971)—is difficult, but none of the retail security managers we interviewed disagreed with the standard numbers.

Stores use various methods to calculate how much their inventory has "shrunk" over the year. Some use a retail accounting system that enables them to account for each item and its cost as it comes in the store. Next, they total how much leaves the store in the form of sales, breakage, and so on. At year's end, they conduct an inventory of the current stock; the difference between inventory plus sales/breakage and the total merchandise that enters the store is considered shrinkage. Certain technological advances (for example, optical scanners at the cash register) allow some stores to estimate inventory as often as the close of each business day.

Not all stores can or do calculate their shrinkage in this manner. One method of estimating shrinkage is based on an estimate of potential sales. When a retail chain opens a new store, it makes a calculation to determine a "hypothetical gross margin" (HGM). As years go by, the chain can establish the next year's HGM based on historical data. Barring any great differences in the merchandise that comes into the store, the difference between the HGM and sales is considered shrinkage. Variables can affect this estimate—for example, a similar store opening up across the street. A certain skepticism is justified about the inferential value of this type of shrinkage calculation, given that it is based on a chain of hypotheticals, each of which seems fairly shaky.

Shrinkage estimates, then, are very imprecise, but they provide the most reasonable (and perhaps the only) starting point for calculating income generated from retail theft. As we mentioned above, several factors can contribute to inventory shrinkage. As a security manager for an area grocery store stated,

If I'm seeing a great deal of shrink from the meat department, it could be because of any one of a number of reasons. The cashiers may not be ringing the product up. It could be miscounted in receiving, or the stuff may never make it in the back door. It could be bad when it comes in or it may spoil while it's here. My butcher may be trimming off too much. Or, it could be the guy in the overcoat stuffing it into his inside pockets.¹⁷

The security professional's goal is to reduce shrinkage; several ways of accomplishing this goal exist. Accomplishing it does not necessarily require developing precise numbers as to the source of the shrinkage. The reduction in total shrinkage is the appropriate measure of the accomplishment.¹⁸ Thus, in assigning a portion of shrinkage to theft, either by employees or outsiders, we are forced to work with expert judgments that have not been subject to much reality testing.

Security managers, though admitting it is little more than informed speculation, estimate that half the shrinkage is internal theft or "sweetheart deals"—a combination of internal/external theft. These opportunities for such theft are introduced by stores that rely on vendors to deliver and/or stock goods. In such cases, a substantial amount of merchandise may be stolen without it ever entering the store, frequently as the result of a dishonest or poorly trained receiving clerk.¹⁹ Few retailers disagree that at least half of shrinkage results from theft. To assert that nontheft factors account for at least 10 percent of shrinkage is also reasonable. This leaves a range of 50 to 90 percent of shrinkage accounted for by theft.

Who Shoplifts?

Ascertaining who shoplifts and what he or she steals is extremely important in estimating the income from shoplifting. The housewife who steals \$7 worth of goods from a grocery store contributes \$7 to the household. The professional who steals \$70 worth of goods from the department store but sells them for ten cents on the dollar also realizes \$7 of income. In calculating the amount of income realized by

¹⁷Conversation with head of security for a Washington-area grocery store chain.

¹⁸In describing his strategy for reducing shrinkage, the vice-president for loss prevention for the 25-unit Marshall Field's department store chain made little reference to determining the exact source of that shrinkage. "No one ever suggested attacking the problem by setting shortage goals at store level, or through the merchandise division. No one tried to get some commitment to shrink control through awareness programs. Most people want to pump money into security. They think if they get more apprehensions, they've solved their problem. We think a well-rounded program is the answer" (Arthur Young, 1988).

¹⁹We classify this employee theft as white-collar crime because it is committed in the course of the individual's job.

individuals as a result of retail theft, we must make some adjustment to account for who does the stealing and for what reasons (self-supply or later resale).

The head of security for a Washington-area general merchandise chain estimated that 80 percent of the people arrested for shoplifting were what society considers "respectable people." These people are the ones who typically buy some/steal some, stealing merchandise usually totaling less than \$10. The other 20 percent are the so-called professional shoplifters. These professionals have more targeted theft patterns; the head of security believed that such professionals accounted for a disproportionately large share of the value of goods stolen—perhaps as much as 35 percent for his stores. Although these percentages may be typical of the convenience store, drugstore, or grocery store, department stores observe a different composition, with more professional boosters and with a larger proportion being the theft of items resold for cash. Theft of merchandise for other than personal use may account for as much as 90 percent of the value stolen in these stores.

The Greater Washington Board of Trade surveys its members each year about the amount of shrinkage²⁰ retailers experienced during the previous year. Using total sales figures and estimates of retail sales for the region, the Board of Trade then calculates an estimate for the metropolitan area. For 1987, this estimate was approximately \$359 million.²¹ With two assumptions and some algebra, we can estimate the proportion of the \$359 million accounted for by food stores, drugstores, and other retailers. First, using national figures for 1987 retail sales, we calculate that food stores and drugstores accounted for 33.1 percent of all nondurable retail sales (Bureau of the Census, 1989a). Second, we use shrinkage estimates of 1.5 percent for food stores and drugstores, and 2.5 percent for other retailers. From these estimates and the total shrinkage figure, we can assign \$82 million of the shrinkage to food stores and drugstores, and the remainder (\$277 million) to other retailers.²² These shrinkage estimates imply total food store and drugstore sales for the metropolitan area of approximately \$5.5 billion

²⁰The exact wording of the question is, "What was the approximate shortage in your store?"

²¹The Board of Trade figure was actually \$460 million, but this was calculated for an area that included suburban counties not part of our defined metropolitan area. These outlying counties accounted for 22 percent of retail sales for the area (Bureau of the Census, 1984), and the shrinkage figure was adjusted downward to reflect that.

²²The calculation is the result of solving a series of three equations with three unknowns: (1) \$359 million = .015 (food/drug sales) + .025 (other retail sales); (2) food/drug sales + other retail sales = total nondurable sales; (3) food/drug sales = .331 (total nondurable sales).

and other retail sales of \$11 billion. These sales figures can be compared to an estimated \$13 billion in nondurable goods sales for the area in 1987, as reported by the Bureau of the Census (1989a). Like the previous calculation of the average value of a completed property crime, our estimate of income generated from retail theft appears to be biased upward.

Assuming that 10 percent of shrinkage results from "paperwork errors," we estimate that \$74 million worth of merchandise is stolen from food stores and drugstores, and \$249 million from other retailers. We must then make assumptions as to the motive for the theft. Are the stolen items for personal use (and thus realized as income at close to their full value²³), or do thieves exchange the merchandise for cash, realizing less than the full value? Based on conversations with security personnel and police, we assume that 65 percent of the goods stolen from food stores and drugstores are for the thieves' own use, while only 10 percent of the merchandise stolen from other retailers should not be discounted further. Therefore, we estimate the total income realized from retail theft for personal use to be \$73 million.

The remaining \$250 million of stolen merchandise must undergo further discounting to reflect the "fencing factor." The shoplifter does possess a slight advantage over the household burglar, however, when dealing with a fence. First, the shoplifter deals in new merchandise, which commands a higher price. Second, the shoplifter can more readily "steal to order," providing the fence with goods for which a demand already exists. Thus, we assume that the shoplifter can receive anywhere from 15 to 35 cents on the dollar for stolen merchandise, compared to 10 to 25 cents for the burglar or household thief.²⁴ Applying these fencing factors produces a range of \$38-\$88 million in income from reselling merchandise stolen from retailers. The total estimate of income from retail theft, then, ranges from \$111 million to \$161 million.

CONCLUSIONS

Retail theft and other property crime in the Washington metropolitan area jointly produce \$140-\$227 million in income. By comparison,

²³Full price will overstate the value to the thief, who chose not to purchase it at that price.

²⁴One experienced police official pointed to heroin addicts' significant involvement in shoplifting. This involvement might reduce the average price paid by fences (as a share of market value) because the addict's needs are acute and he is less willing to engage in the potentially time-consuming activity of finding alternative outlets (that is, bargaining with many fences).

a report published by the District of Columbia Office of the Mayor estimated that the District government spent \$965 million in 1986 on programs serving the poor (1988). Using 1980 census data, Joan Maxwell of the Greater Washington Research Center estimated that 46 percent of the area's poor reside in the District (1985). Maxwell²⁵ also believes that Washington, D.C., spends more per capita on services and transfers to the poor than do other local jurisdictions. Between \$1.5 billion and \$1.75 billion would then be a rough estimate of the money spent on assistance and services for the poor. If we were to assign all the income from property crime to the poor, the \$140-\$227 million would be a significant supplement, but hardly a sustaining source of income for the total poverty population. Dividing the entire property-crime income among the estimated quarter of a million people living in poverty in the metropolitan area (Maxwell, 1985) would yield a total of \$500-\$900 per person.

Two factors further reduce these estimates' significance for the low-income population. First, not all property crimes are committed by persons living in poverty. Shoplifting, the crime that accounts for a majority of the estimated income, has a significant share of participants from middle- and upper-income levels. Surveys of security professionals in the metropolitan area have always included questions about shoplifter profiles. The results of these surveys have been marked by the diversity of answers to the request for a "shoplifter profile." In the opinions of security professionals, certainly less than a majority—and perhaps less than one-fourth—of the shoplifters they apprehend are individuals living in poverty.²⁶

To assign 80 percent of the property crime other than shoplifting to the poor and 50 percent of shoplifting income to the same group might be reasonable. Doing so yields a property crime income total of \$77-\$133 million for the poor;²⁷ remember that this total, in contrast to our calculations in the preceding sections, covers the entire metropolitan area, not just the District of Columbia.

²⁵Personal communication.

²⁶Respondents to the Board of Trade's survey estimated that 23 percent of their shoplifters could be categorized as low income (the term was not defined in the questionnaire). Less than 10 percent were estimated to be high school dropouts. Arthur Young (1988) reported that of the customers apprehended for shoplifting, 55 percent were employed. On the other hand, note that this is a count of *individuals*, not of *income*; perhaps poorer persons who engage in shoplifting commit the offense at a higher rate because they have less at risk from apprehension. Higher frequency may also engender greater skill at avoiding detection, making the apprehended population even less representative of the offender population.

²⁷These calculations assume that none of the income of fences should be assigned to the poor. Police descriptions of fencing outlets suggest that this is a reasonable first approximation.

Second, in considering this income as a contribution to the economic well-being of the poor, we must note that not all of it is "new" income to the poverty community. Income realized as a result of goods stolen from another individual in poverty is not a net gain for the poverty population. Instead, it is an involuntary transfer from one low-income individual to another. Moreover, it reduces the community's welfare by increasing the riskiness of holding assets; a TV set that has a 25 percent risk of being stolen in a year is a less attractive purchase than one that has a 5 percent probability of theft. The poor are disproportionately the victims of property crime, so this is an important factor in reducing the net contribution of property crime to the poor's economic well-being. The poor incur the costs of precautions to protect their property, in addition to incurring the direct losses. They are also likely to suffer from the exit of capital as a result of investors' inability to protect their property.

Nor has property crime increased greatly in recent years. For example, national UCR data on the number of reported robberies, personal larcenies, and burglaries for 1978 were only 8 percent less than in 1987; in the District of Columbia, the 1987 total was only 3 percent greater than in 1978 (11 percent on a per capita basis). That a major rise has occurred in the attractiveness of property crime as an activity is unlikely.

REFERENCES

- Adler, Patricia, *Wheeling and Dealing: An Ethnography of an Upper-Level Drug Dealing and Smuggling Community*, Columbia University Press, New York, 1985.
- Anglin, M. Douglas, and George Speckart, "Narcotics Use, Property Crime and Dealing: Structural Dynamics across the Addiction Career," *Journal of Quantitative Criminology*, Vol. 2, 1986.
- Ball, John, et al., "Lifetime Criminality of Heroin Addicts in the United States," *Journal of Drug Issues*, Vol. 12, 1982.
- Belenko, S., K. Chin, and J. Fagan, "Typologies of Criminal Careers among Crack Arrestees," paper presented at the Annual Meeting of the American Society of Criminology, November 1989.
- Bell, Daniel, "The Racket-Ridden Longshoremen," in *The End of Ideology*, Free Press, Glencoe, Ill., 1962.
- Biderman, Albert, and Albert Reiss, *Sources of Data on White-Collar Crime*, National Institute of Justice, Washington, D.C., 1980.
- Blumstein, Alfred, and Jacqueline Cohen, "Estimation of Individual Crime Rates from Arrest Records," *Journal of Criminal Law and Criminology*, Vol. 70, 1979.
- Blumstein, Alfred, and Elizabeth Graddy, "Prevalence and Recidivism in Index Arrests: A Feedback Model," *Law and Society Review*, Vol. 16, No. 2, 1981-1982.
- Bourgois, Philippe, "Just Another Night on Crack Street," *New York Times*, November 12, 1989.
- Brounstein, Paul, et al., *Patterns of Substance Use and Delinquency among Inner City Adolescents*, The Urban Institute, Washington, D.C., 1989.
- Bureau of the Census, *1982 Census of Retail Trade*, Vol. 2: *Geographic Area Statistics*, U.S. Government Printing Office, Washington, D.C., 1984.
- , *Revised Monthly Retail Sales and Inventories: January 1979 through December 1988*, Current Business Reports (BR88-R), U.S. Government Printing Office, Washington, D.C., 1989a.
- , *Money Income and Poverty Status in the U.S., 1988*, Current Population Survey Series P-60, No. 166, 1989b.
- Bureau of Justice Statistics, *Sourcebook of Criminal Justice Statistics, 1987*, Washington, D.C., 1988.
- , *Criminal Victimization in the United States*, National Crime Survey, Washington, D.C., annual.

- , *Prosecution of Felony Arrests, 1986*, Washington, D.C., 1989a.
- , *Felony Sentences in State Courts, 1986*, Washington, D.C., 1989b.
- California Department of Justice, Bureau of Criminal Statistics and Special Services, *California Offender-Based Transactions Statistics*, Sacramento, Calif., annual.
- Carver, John, "Drugs and Crime: Controlling Use and Reducing Risk through Testing," *NIJ Reports*, National Institute of Justice, Washington, D.C., September/October 1986.
- Caulkins, John, "Punishment Policies' Effect on Illicit Drug Users' Purchasing Habits," Working Paper OR 202-89, Operations Research Center, Massachusetts Institute of Technology, Cambridge, Mass., October 1989.
- Cave, Jonathan, and Peter Reuter, *The Interdictors' Lot: A Dynamic Model of the Market for Drug Smuggling Services*, The RAND Corporation, N-2632-USDP, February 1988.
- Chaiken, Jan M., and Marcia R. Chaiken, *Varieties of Criminal Behavior*, The RAND Corporation, R-2814-NIJ, August 1982.
- Clayton, Richard, and Harlan Voss, *Young Men and Drugs in Manhattan: A Causal Analysis*, Research Monograph 39, National Institute on Drug Abuse, Rockville, Md., 1981.
- Cobb, William, "Theft and the Two Hypotheses," in Simon Rottenberg (ed.), *The Economics of Crime and Punishment*, American Enterprise Institute, Washington, D.C., 1973.
- Cox, Brenda, and James J. Collins, *Criminal Victimization of District of Columbia Residents and Capitol Hill Employees: May 1982-April 1983*, NCJ-97982, Bureau of Justice Statistics, Washington, D.C., 1985.
- Cuniff, Mark, *A Sentencing Postscript: Felony Probationers under Supervision in the Community*, Bureau of Justice Statistics/National Association of Criminal Justice Planners, Washington, D.C., 1986.
- DiIulio, John, "Crime and the Underclass," *The Public Interest*, Summer 1989.
- District of Columbia Office of Criminal Justice Plans and Analysis, *Drugs and Crime in the District of Columbia*, Washington, D.C., 1987.
- , *Homicide in the District of Columbia*, Washington, D.C., 1989.
- District of Columbia Office of the Mayor, *Spending for Low-Income Programs in the District of Columbia: Fiscal Year 1986*, District of Columbia Government, Washington, D.C., September 1988.
- Drake, St. Clair, and Horace Cayton, *Black Metropolis*, 2 vols., 2d ed., Harper and Row, New York, 1962.

- Drug Enforcement Administration, Office of Intelligence, *Domestic Price Trends*, Washington, D.C., various years.
- Duncan, Greg J., and James N. Morgan (eds.), *Five Thousand American Families—Patterns of Economic Progress*, Vol. 10: *Analyses of the First 13 Years of the Panel Study of Income Dynamics*, Institute for Social Research, University of Michigan, Ann Arbor, Mich., 1983.
- Elliott, Delbert, David Huizinga, and Suzanne Agerton, *Explaining Delinquency and Drug Use*, Sage Publications, Beverly Hills, Calif., 1985.
- Fagan, Jeffrey, and Ko-lin Chin, "Violence as Regulation and Social Control in the Distribution of Crack," unpublished paper, 1989a.
- , "Social Processes of Initiation into Crack," unpublished paper, 1989b.
- Federal Bureau of Investigation, *Crime in the United States*, Washington, D.C., annual.
- , *Age-Specific Arrest Rates and Race-Specific Arrest Rates for Selected Offenses, 1965–1985*, Washington, D.C. 1986.
- Ferguson, Ronald, *The Drug Problem in Black Communities*, Working Paper No. 87-01-01, Kennedy School of Government, Harvard University, Cambridge, Mass., 1987.
- Garreau, Joel, "The Invisible Hand in Drug Markets," *Washington Post*, December 29, 1988.
- Geis, Gilbert, and Robert Meier (eds.), *White-Collar Crime*, revised ed., Free Press, New York, 1977.
- Godshaw, Gerald, Ross Pancoast, and Russell Koppel, *Anti-Drug Law Enforcement Efforts and Their Impact*, Wharton Econometrics Forecasting Associates, Bala Cynwyd, Penn., 1987.
- Greater Washington Research Center, *Opportunity Ladders—Can Area Employment Possibilities Improve the Prospect for Washingtonians in Long Term Poverty?* Washington, D.C., 1989.
- Grier, Eunice, and George Grier, *People: Low-Income Adults of Working Age in Washington, D.C.*, Greater Washington Research Center, Washington, D.C., 1988.
- Haller, Mark, "The Changing Structure of Illegal Gambling in the United States," *Journal of Social Issues*, Vol. 35, No. 3, 1979.
- Hill, M. Anne, and June O'Neill, *A Progress Report on Underclass Behaviors in the United States: Measurement and Analysis of Determinants*, Center for the Study of Business and Government, Baruch College, N.Y., 1990.
- Holden, Constance, "Street-Wise Crack Research," *Science*, Vol. 246, December 15, 1989.

- Ianni, F., and E. Reuss-Ianni, *A Family Business*, Russell Sage Foundation, New York, 1972.
- Jensen, Gary F., "Crime Doesn't Pay: Correlates of a Shared Misunderstanding," *Social Problems*, Vol. 17, 1969.
- Johnson, Bruce D., et al., *Taking Care of Business: The Economics of Crime by Heroin Abusers*, D.C. Heath, Lexington, Mass., 1985.
- , "Drug Abuse in the Inner City: Impact on Hard-Drug Users and the Community," in Michael Tonry and James Q. Wilson (eds.), *Drugs and Crime*, University of Chicago Press, Chicago, Ill., 1990.
- Johnston, Lloyd, Patrick O'Malley, and Gerald Bachman, *National Trends in Drug Use and Related Factors among American High School Students and Young Adults 1975-1986*, National Institute on Drug Abuse, Rockville, Md., 1987.
- Kallick, Maureen, "The Micro and Macro Dimensions of Gambling in the United States," *Journal of Social Issues*, Vol. 35, No. 3, 1979.
- Kaplan, John, *Heroin: The Hardest Drug*, University of Chicago Press, Chicago, Ill., 1983.
- Kasarda, John, "Jobs, Migration, and Emerging Urban Mismatches," in Michael McGeary and Laurence Lynn (eds.), *Urban Change and Poverty*, National Academy Press, Washington, D.C., 1988.
- Katz, Jack, *The Seductions of Crime*, Basic Books, New York, 1989.
- Kleiman, Mark, *Marijuana: Costs of Abuse, Costs of Control*, Greenwood Press, Boulder, Colo., 1989.
- Krohm, Gregory, "The Pecuniary Incentives of Property Crime," in Simon Rottenberg (ed.), *The Economics of Crime and Punishment*, American Enterprise Institute, Washington, D.C., 1973.
- Laub, J., "Ecological Considerations in Victim Reporting to the Police," *Journal of Criminal Justice*, Vol. 19, 1981.
- Light, Ivan, "Numbers Gambling among Blacks: A Financial Institution," *American Sociological Review*, Vol. 46, No. 6, December 1977.
- Mathieson, D., and P. Passell, "Homicide and Robbery in New York City: An Economic Model," *Journal of Legal Studies*, Vol. 5, 1976.
- Mauer, Marc, *Young Black Men and the Criminal Justice System: A Growing National Problem*, The Sentencing Project, Washington, D.C., 1990.
- Maxwell, Joan P., *No Easy Answers: Persistent Poverty in the Metropolitan Washington Area*, Greater Washington Research Center, Washington, D.C., 1985.
- Mieczkowski, Thomas, "Geeking Up and Throwing Down: Heroin Street Life in Detroit," *Criminology*, Vol. 24, No. 4, November 1986.

- , "Crack Distribution in Detroit," *Journal of Contemporary Drug Problems*, 1990.
- Moore, Mark, *Buy and Bust*, D.C. Heath, Lexington, Mass., 1977.
- Murphy, Sheigla, Craig Reinerman, and Dan Waldorf, "An 11-Year Follow-up of a Network of 27 Cocaine Users," *British Journal of Addictions*, forthcoming.
- Murray, Charles, *Losing Ground: American Social Policy, 1950-1980*, Basic Books, New York, 1984.
- National Center for Educational Statistics, *The Condition of Education*, Washington, D.C., 1988.
- National Institute of Justice, "Drug Urinalysis Forecasting," *Research in Action*, Washington, D.C., September 1989.
- National Institute on Drug Abuse, *National Household Survey on Drug Abuse: Population Estimates 1988*, Rockville, Md., 1989.
- National Narcotics Intelligence Consumers Committee, *Narcotics Intelligence Estimate*, Washington, D.C., annual.
- Newcomb, M. D., and P. M. Bentler, "Substance Use and Abuse among Children and Teenagers," *American Psychologist*, Vol. 44, 1989.
- Office of National Drug Control Policy, *National Strategy*, U.S. Government Printing Office, Washington, D.C., 1989.
- Passell, Jeffrey, Jacob Siegal, and Gregory Robinson, *Coverage of the National Population in the 1980 Census by Age, Sex, and Race*, Bureau of the Census, U.S. Government Printing Office, Washington D.C., 1982.
- Petersilia, Joan, Peter Greenwood, and Marvin Lavin, *Criminal Careers of Habitual Felons*, The RAND Corporation, R-2144-DOJ, August 1977.
- Polich, J. Michael, Phyllis Ellickson, Peter Reuter, and James Kahan, *Strategies for Controlling Adolescent Drug Use*, The RAND Corporation, R-3076-CHF, February 1984.
- Reuter, Peter, *Disorganized Crime: The Economics of the Visible Hand*, MIT Press, Cambridge, Mass., 1983.
- , "The (Continued) Vitality of Mythical Numbers," *The Public Interest*, Spring 1984.
- , "An Economist Looks at the Carnage," *Washington Post*, March 26, 1989
- Reuter, Peter, Gordon Crawford, and Jonathan Cave, with P. J. Murphy, D. P. Henry, W. J. Lisowski, and E. S. Wainstein, *Sealing the Borders: The Effects of Increased Military Participation in Drug Interdiction*, The RAND Corporation, R-3594-USDP, January 1988.
- Reuter, Peter, and John Haaga, *The Organization of High-Level Drug Markets: An Exploratory Study*, The RAND Corporation, N-2830-NIJ, February 1989.

- Reuter, Peter, John Haaga, Patrick Murphy, and Amy Praskac, *Drug Use and Drug Programs in the Washington Metropolitan Area*, The RAND Corporation, R-3655-GWRC, July 1988.
- Reuter, Peter, and Mark Kleiman, "Risks and Prices: An Economic Analysis of Drug Enforcement," in Michael Tonry and Norval Morris (eds.), *Crime and Justice: An Annual Review of Research*, No. 7, University of Chicago Press, Chicago, Ill., 1986.
- Rickets, Errol, and Isabel Sawhill, "Defining and Measuring the Underclass," *Journal of Policy Analysis and Management*, Vol. 7, No. 2, Winter 1988.
- Riedel, Marc, and Terence Thornberry, "The Effect of Increased Enforcement of Gambling Laws," *Report of the Commission on Review of the National Policy toward Gambling: Appendix 1*, U.S. Government Printing Office, Washington, D.C., 1976.
- Rottenberg, Simon, "The Clandestine Distribution of Heroin: Its Discovery and Suppression," *Journal of Political Economy*, Vol. 76, 1967.
- Rubinstein, Jonathan, *Big City Police*, Farrar, Straus and Giroux, New York, 1973.
- Sawhill, Isabel, "Poverty in the U.S.: Why Is It So Persistent?" *Journal of Economic Literature*, Vol. 26, No. 3, 1988.
- , "The Underclass: An Overview," *The Public Interest*, No. 96, Summer 1989.
- Schneider, A., J. Burcart, and L. A. Wilson III, "The Role of Attitudes in the Decision to Report Crimes to the Police," in W. McDonald (ed.), *Criminal Justice and the Victim*, Sage Publications, Beverly Hills, Calif., 1976.
- Sesnowitz, M., "The Returns to Burglary," in L. McPheters and W. Stronge (eds.), *The Economics of Crime and Law Enforcement*, Charles C. Thomas, Springfield, Ill., 1976.
- Siegel, Ronald, "Part I: History of Cocaine Smoking," *Journal of Psychoactive Drugs*, Vol. 14, 1982.
- Simon, Carl, and Ann Witte, *Beating the System*, Auburn House, Cambridge, Mass., 1982.
- Singer, Max, "The Vitality of Mythical Numbers," *The Public Interest*, No. 23, Spring 1971.
- Sjoquist, D. L., "Property Crime and Economic Behavior: Some Empirical Results," *American Economic Review*, June 1973.
- Skogan, Wesley G., *Issues in the Measurement of Victimization*, Bureau of Justice Statistics, U.S. Department of Justice, Washington, D.C., 1981.
- , "Reporting Crimes to the Police: The Status of World Research," *Journal of Research in Crime and Delinquency*, Vol. 21, No. 2, May 1984.

- Skolnick, Jerome, et al., "The Social Structure of Street Drug Dealing," *BCS Forum*, 1989.
- Slovic, Paul, Baruch Fischhoff, and Sarah Lichtenstein, "Facts versus Fears: Understanding Perceived Risk," in D. Kahneman, P. Slovic, and A. Tversky (eds.), *Judgement under Uncertainty: Heuristics and Biases*, Cambridge University Press, Cambridge, Eng., 1982.
- Smith, James, and Finis Welch, "Black Economic Progress after Myrdal," *Journal of Economic Literature*, Vol. 27, No. 2, June 1989.
- Thaler, Richard, and Sherwin Rosen, "The Value of Saving a Life: Evidence from the Labor Market," in Nestor Terleckyj (ed.), *Household Production and Consumption*, University of Chicago Press, Chicago, Ill., 1975.
- Thompson, James, and James Cataldo, "Comment" [on Viscusi], in Richard Freeman and Harry Holzer (eds.), *The Youth Employment Crisis*, University of Chicago Press, Chicago, Ill., 1986.
- Tillman, Robert, "The Size of the 'Criminal Population': The Prevalence and Incidence of Adult Arrests," *Criminology*, Vol. 25, No. 3, Fall 1987.
- Toborg, Mary, et al., *Assessment of Pretrial Urine Testing in the District of Columbia*, National Institute of Justice, Washington, D.C., 1989.
- U.S. Department of Health and Human Services, *Report of the Secretary's Task Force on Black and Minority Health*, Vol. 5, Washington, D.C., 1986.
- Viscusi, W. Kip, "Alternative Approaches to Valuing the Health Impacts of Accidents: Liability Law and Prospective Evaluation," *Law and Contemporary Problems*, Vol. 46, No. 4, 1983.
- , "Market Incentives for Criminal Behavior," in Richard Freeman and Harry Holzer (eds.), *The Youth Employment Crisis*, University of Chicago Press, Chicago, Ill., 1986.
- Warner, Kenneth, "Cigarette Taxation: Doing Good by Doing Well," *Journal of Public Health Policy*, Vol. 5, September 1984.
- Weinberg, Daniel, "A Poverty Research Agenda for the Next Decade," in Sheldon Danziger and Daniel Weinberg (eds.), *Fighting Poverty: What Works and What Doesn't*, Harvard University Press, Cambridge, Mass., 1986.
- Wheeler, Stanton, et al., "White Collar Crimes and Criminals," *American Criminal Law Review*, Vol. 25, No. 3, 1988.
- Williams, Terry, *The Cocaine Kids*, Addison-Wesley, Reading, Mass., 1989.
- Wilson, William Julius, *The Truly Disadvantaged*, University of Chicago Press, Chicago, Ill., 1987.

- Windle, M., G. M. Barnes, and J. Welte, "Causal Models of Adolescent Substance Abuse: An Examination of Gender Differences Using Distribution-Free Estimators," *Journal of Personality and Social Psychology*, Vol. 56, 1989.
- Winer, B. J., *Statistical Principles in Experimental Design*, 2d ed., McGraw-Hill, New York, 1971.
- Young, Arthur, *An Ounce of Prevention: 1988-1989 Edition*, New York, 1988.
- Zimring, Franklin, and James Zuehl, "Victim Injury and Death in Urban Robbery: A Chicago Study," *Journal of Legal Studies*, Vol. 15, No. 1, 1986.

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