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PRISON TIME, FINES, AND FEDERAL WHITE-COLLAR CRIMINALS: THE ANATOMY OF A RACIAL DISPARITY

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I. INTRODUCTION

Do criminals of different races, sexes, or socio-economic status receive different sentences? If so, why? For decades, these have been among the predominant questions in the academic and political discussion of sentencing. There was at least one study of sentencing disparity conducted in the 1920s,[1] and many other studies were undertaken over the next six decades.[2] The Federal Sentencing Guidelines (the "Federal Guidelines" or the "Guidelines") arose in part from a desire to eliminate unwarranted sentencing disparity between judges,[3] and the focus on disparity has not

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[1] *See* Thorsten Sellin, *The Negro Criminal: A Statistical Note*, 140 ANNALS AM. ACAD. POL. & SOC. SCI. 52 (1928).

[2] *See* John Hagan, *Extra-Legal Attributes and Criminal Sentencing: An Assessment of a Sociological Viewpoint*, 8 LAW & SOC'Y REV. 357 (1974) (surveying the literature); *see also* DOROTHY CAMPBELL TOMPKINS, SENTENCING THE OFFENDER—A BIBLIOGRAPHY (1971) (same); Edward Green, *Research on Disparities*, *in* THE CRIMINAL IN THE ARMS OF THE LAW 529 (Leon Radzinowicz & Marvin E. Wolfgang eds., 1971) (same); Andrew Overby, *Discrimination Against Minority Groups*, *in* THE CRIMINAL IN THE ARMS OF THE LAW 569 (same); Gary Kleck, *Racial Discrimination in Criminal Sentencing: A Critical Evaluation of the Evidence with Additional Evidence on the Death Penalty*, 46 AM. SOC. REV. 783 (1981) (same).

[3] *See* KATE STITH & JOSE A. CABRANES, FEAR OF JUDGING: SENTENCING GUIDELINES IN THE FEDERAL COURTS 38-77, 104, and accompanying notes (1998).

abated since the Guidelines took effect in 1987.[4] Indeed, the recent Supreme Court decision in *United States v. Booker*,[5] which arguably grants greater discretion to district courts in criminal sentencing by making the Guidelines "advisory," will heighten interest in disparity.

We examine racial disparities in white collar criminal sentencing using a large dataset provided by the United States Sentencing Commission. We also discuss sex disparities at some length, in part because they provide an interesting contrast to racial disparities. We focus on white collar crimes (non-violent, economic crimes) for several reasons. First, it is perhaps surprising that racial disparities persist for such crimes, which would not appear to be as racially tinged as those involving violence or drug trafficking. Second, the presence of significant alternative punishments, such as fines, leaves more room for judicial discretion than in the case of more serious crimes. Finally, there are fewer sources of disparity in white collar crimes. For example, in the case of drug crimes, legislatures make distinctions between crack and powder cocaine and mandate minimum sentences.[6] In addition, the crimes are likely reported in different ways: drug traffickers are likely caught in sting operations, whereas those who commit fraud or embezzlement are likely more often sought after due to victim complaints.

We find large racial disparities using standard regression techniques. In other words, when controlling for as many relevant characteristics as possible, blacks and Hispanics receive longer prison sentences than whites. This is consistent with previous studies. However, careful consideration of the nature of white collar crimes reveals that a large portion (up to one-third) of the estimated disparity is driven by the ability to pay a fine. Similarly, income is also shown to be an important factor, and it is poorly measured in the data. In addition, we find that the calculation of the Guideline's sentencing range may actually work in favor of minorities, and determining the sentencing range is one of the most important elements of Guideline's sentencing scheme. Our results call into question traditional studies of sentencing disparities, and we conclude that the estimation of racial disparities, even under a determinant sentencing framework like the Guidelines, is more complicated than previous work indicates.

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[4] *See* Sentencing Reform Act, Pub. L. No. 98-473, 98 Stat. 1837 (1984).

[5] 125 S. Ct. 738, 767 (2005).

[6] To trigger mandatory minimum drug sentences, powdered cocaine trafficked must be one hundred times that of crack. 21 U.S.C. § 841(b)(1)(A)(iii)-(B)(iii) (2000). For a discussion and critique, see Albert Alschler, *Disparity: The Normative and Empirical Failure of the Federal Guidelines*, 58 STAN. L. REV. 85, 102-04 (2005).

This Paper is organized as follows: Part II discusses how prison sentences and fines are calculated under the Federal Sentencing Guidelines. Part III discusses the empirical and theoretical literature on fines and white-collar sentencing. Part IV discusses the data and the methodology of our study with a particular focus on the problems of identifying racial bias empirically. Part V describes and interprets the results of our study. Part VI concludes.

II. THE FEDERAL SENTENCING GUIDELINES

For most of American history, federal district court judges had vast discretion over sentencing. Some statutes prescribed a maximum fine or time of imprisonment for a particular crime, and a handful prescribed minimums. Otherwise, trial judges were basically free to impose the sentences they thought appropriate. The law gave them almost no guidance in the exercise of their discretion, and their judgments were virtually never subject to appellate review.[7]

All of this changed when Congress passed the Sentencing Reform Act of 1984.[8] The law established the Sentencing Commission, a bipartisan, independent agency within the judicial branch, and charged it with "promulgating detailed guidelines prescribing the appropriate sentences for [federal] offenders."[9] The Sentencing Act also "direct[ed] the Commission to periodically review and revise the Guidelines" and "authorize[ed] the Commission to submit amendments to Congress."[10] Accordingly, from the time the Guidelines took effect on November 1, 1987 until the *Booker* decision, sentencing in federal courts has been controlled by a comprehensive set of rules created by an administrative agency. Prior to *Booker*, the Guidelines were mandatory and were treated as such by the courts.[11] Except for special circumstances in which "departures" are authorized, a trial judge must sentence a criminal in accordance with the

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[7] STITH & CABRANES, *supra* note 3, at 9-11. The structure and language of our description of the Sentencing Guidelines owes much to Stith and Cabranes's book and to an essay by Frank Bowman. *See* Frank O. Bowman, III, *The 2001 Federal Economic Crime Sentencing Reforms: An Analysis and Legislative History*, 35 IND. L. REV. 5 (2001).

[8] *See* Sentencing Reform Act.

[9] 28 U.S.C. § 991(b)(1)(b) (2000). For a brief description of the Commission's composition, see Ami L. Feinstein et al., *Eighth Survey of White Collar Crime Procedural Issues: Federal Sentencing*, 30 AM. CRIM. L. REV. 1079, 1080 (1983).

[10] Feinstein et al., *supra* note 9, at 1083 (citing 28 U.S.C. § 994 (o), (p) (1980)).

[11] 28 U.S.C. § 3553 (2000) (*invalidated by* United States v. Booker, 125 S. Ct. 738, 745-46 (2005)).

Guidelines or risk a reversal on appellate review.[12] *Booker*, discussed in greater detail below, made the Guidelines "advisory" but still requires district court judges to consult them.

A. PRISON SENTENCES UNDER THE GUIDELINES

Although complex in application, the Guidelines are fairly straightforward in theory. As one commentator has observed, the Guidelines can be understood as "nothing more than a set of instructions for one chart — the Sentencing Table."[13]

Under the Guidelines, a defendant is sentenced by determining in which of the 258 boxes of the Table he or she belongs.[14] A judge uses the Guidelines to calculate the defendant's "offense level," a figure intended to measure the gravity of the crime currently, and the defendant's "criminal history category," a figure intended to measure the gravity of the offender's past criminal conduct. The offense level is the position on the vertical or y-axis of the grid (expressed in Arabic numerals), and the criminal history category is the position on the horizontal or x-axis of the grid (expressed in Roman numerals). The intercept of the two factors provides a sentencing range expressed in months. For example, a defendant with an offense level of 9 and a criminal history category of I can be sentenced from four to ten months. Because all sentences are expressed on the chart in terms of months of imprisonment, sentences consisting solely of probation, fines, or non-prison confinement (the latter category includes house arrest and time in a "half way house") are denoted as sentences of "0" months. This range is the area in which a judge has absolute discretion. If a judge has properly calculated the offense level and criminal history, a sentence within this range is unreviewable.[15]

1. Offense Level Calculations

A defendant's offense level is comprised of several elements: (1) the points assigned to the specific statutory violation at issue (also called the base offense level);[16] (2) adjustments to the base offense level that reflect relevant conduct specific to the crime of conviction ("relevant conduct" is a

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[12] A sentence within a properly calculated Guidelines range is not reversible. 18 U.S.C. § 3742 (2000).

[13] *See supra* note 7, at 9.

[14] *See infra* Appendix 1.

[15] 18 U.S.C. § 3742.

[16] Base offense levels are specified in the *United States Sentencing Guidelines Manual*, Chapter Two—Offense Conduct. For example, price fixing has a base offense level of 10. U.S. SENTENCING GUIDELINES MANUAL § 2R1.1(a) (2006).

term of art under the Guidelines and can include size of the loss, other crimes committed by the defendant, and even other crimes committed by his accomplices);[17] and (3) the points assigned to general offense adjustments that apply equally to all offense categories, such as the offender played an aggravating role in the offense.[18]

The points assigned to the specific statutory violation at issue take two forms: the "base offense level" of the crime, meaning the amount of points the commission assigned to conviction for a particular statutory violation, and the "specific offense characteristics" of the crime, meaning the particular aspects of a crime that make it more or less blameworthy than other violations of the same statute.[19] Examples of specific offense characteristics include the amount of money stolen in a fraud and the amount of violence involved in the course of a robbery.[20] So far, then, the system appears relatively simple in application as well as theory: Every criminal who commits a robbery receives the base level of points, and those who commit an especially violent robbery receive additional points for specific offense characteristics. However, the precise number of special points given for specific offense conduct depends not only upon the conduct—such as possessing a weapon—but also upon the underlying statutory crime. For example, a robber receives five extra points for possessing a firearm, while a drug trafficker receives just two points for possessing any dangerous weapon (including a firearm).[21]

As noted above, "relevant conduct" can include other crimes by the defendant and other crimes committed by his accomplices. A court is supposed to take "relevant conduct" into effect if it is proved by a "preponderance of the evidence" (a lower standard than "beyond a reasonable doubt") at the sentencing hearing, irrespective of whether the defendant had been charged with the conduct in the indictment. A judge is

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[17] These are often called "Specific Offense Characteristics" and are specified for each crime in Chapter Two of the Guidelines Manual. For example, price-fixing has a base offense level of 10, but adjustments are made based on the "value of commerce" affected. *See id.* § 2R1.1(b)(2). For a discussion, see STITH & CABRANES, *supra* note 3, at 70.

[18] These are detailed in the Guidelines Manual, Chapter Three—Adjustments. For example, if the judge at the sentencing hearing finds that the offender played an "aggravating role" in the offense, the offense level may be increased by as much as four levels. U.S. SENTENCING GUIDELINES MANUAL § 3B1.1(a).

[19] *See supra*, notes 15-16.

[20] Bowman, *supra* note 13, at 10.

[21] STITH & CABRANES, *supra* note 3, at 68 n.199 (citing U.S. SENTENCING GUIDELINES MANUAL §§ 2B3.1(G)(2) (1996), 2D1.1(b)(1) (1996)).

even supposed to consider some "relevant conduct" if that conduct underlies charges for which a defendant has been acquitted.[22]

General offense adjustments are applied for aspects of crimes that are not confined to particular statutory violations. Moreover, while the number of points allotted for specific offense characteristics varies depending on the underlying statutory violation, general offense adjustments carry the same weight regardless of the underlying statutory violation. For example, the "vulnerable victim" adjustment is applied for all crimes in which the defendant knew or should have known that the victim was unusually vulnerable due to his age, mental condition, or physical condition; and in all crimes it raises the base offense level by two points.[23]

2. Criminal History Calculations

Criminal history calculations are somewhat more straightforward than offense level calculations. Defendants are assigned criminal history points on the basis of their nominal sentence length, not actual time served, and irrespective of how long ago a conviction occurred. It is also irrelevant whether a defendant's previous conviction has any relation to her current offense. Thus, as Professor Kate Stith and Judge Jose Cabranes note, "a defendant convicted of white collar fraud who recently served a short prison sentence for a previous fraudulent scheme receives the same criminal history enhancement as does the white collar defendant who ten years ago served a sentence for drug possession."[24]

3. Departures from the Guidelines

In most cases a judge must sentence a defendant within the applicable range of the Sentencing Table. However, a judge is authorized to "depart" from the Sentencing Table if, in the words of the Sentencing Reform Act and the Guidelines, "there exists an aggravating or mitigating circumstance of a kind, or to a degree, not adequately taken into consideration by the Sentencing Commission in formulating the Guidelines."[25] Given the comprehensive nature of the Guidelines, this standard weighs against departures. Moreover, a decision to depart can be appealed to a higher

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[22] *See* United States v. Watts, 519 U.S. 148, 157 (1997) (conduct underlying charges for which defendant has been acquitted may be relied on in sentencing); U.S. SENTENCING GUIDELINES MANUAL § 1B1.3 cmt..

[23] *See* U.S. SENTENCING GUIDELINES MANUAL § 3A1.1(b).

[24] STITH & CABRANES, *supra* note 3, at 72.

[25] 18 U.S.C. § 3553(b) (2000); U.S. SENTENCING GUIDELINES MANUAL § 5K2.0 policy statement.

court, whereas a decision *not* to depart cannot be appealed.[26] The basic result of the current system is that departures in general are discouraged and downward departures are especially discouraged.[27] When they occur, it is usually at the prosecutor's prompting.[28] That is, most downward departures are usually given for "substantial assistance," meaning that the prosecutor has recommended that the defendant's sentence be reduced because the defendant has substantially assisted in the prosecution of another individual.[29]

4. United States v. Booker

On January 12, 2005, the Supreme Court held in *United States v. Booker* that the provisions of the Federal Sentencing Act that made the Guidelines binding violated the Sixth Amendment.[30] Despite the severance of the binding provisions, however, the Guidelines remain important. First, the data on Guidelines-era sentences collected by the United States Sentencing Commission (the "Sentencing Commission" or the "Commission") is the richest source of information we have on federal sentences in any era. Second, *Booker* itself provides that "[t]he district courts, while not bound to apply the Guidelines, must consult those Guidelines and take them into account when sentencing."[31] Exactly what "consult" means in the context of the *Booker* and the Guidelines is not yet clear,[32] but at a minimum the Guidelines will probably serve as a sort of treatise or Restatement of Sentencing.[33] Under *Booker*, the circuit court

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[26] The judge's mechanical calculation of offense level and criminal history category can be appealed even when the sentence is within the Guidelines. 18 U.S.C § 3772.

[27] See STITH & CABRANES, *supra* note 3, at 72-77, for a general discussion of departures under the Guidelines.

[28] U.S. SENTENCING COMM'N, DOWNWARD DEPARTURES FROM THE FEDERAL SENTENCING GUIDELINES (IN RESPONSE TO SECTION 401(M) OF PUBLIC LAW 108-21) iv-v (2003), *available at* http://www.ussc.gov/departrpt03/departrpt03.pdf (noting that recently the government initiates 40% of non-substantial assistance downward departures). Substantial assistance departures have also become increasingly common, and in 2003 outpaced non-substantial assistance departures. *Id.* at 32 tbl. 1.

[29] 18 U.S.C. § 3553(e).

[30] United States v. Booker, 125 S. Ct. 738, 767 (2005).

[31] *Id.* at 767.

[32] *Compare* United States v. Wilson, 350 F. Supp. 2d 910 (D. Utah 2005), *and* United States v. Wilson, 355 F. Supp. 2d 1269 (D. Utah 2005), *with* United States v. Ranum, 353 F. Supp. 2d 984 (E.D. Wis. 2005).

[33] *Cf.* United States v. Mueffelman, 327 F. Supp. 2d 79, 96 (D. Mass 2004) (holding the Guidelines unconstitutional after the Supreme Court issued *Blakely v. Washington*, 124 S. Ct. 2531 (2004), but before it issued *Booker*):

likewise relies on the existing guidelines to review the "reasonableness" of the district court's sentence.[34]

How these changes affect sentencing will not be clear for some time, and important questions remain unanswered. For example, do the circuit courts now review departures with greater deference than before? What is a reasonable sentence? Do the Guidelines ranges still represent a safe harbor for sentencing judges? When, as now, the entire legal community is considering wide-ranging reforms and reevaluating the sentencing regime at the federal and state levels, it is especially important that we understand what the actual effects of the Guidelines have been.

B. FINES UNDER THE GUIDELINES

The Guidelines specify that a court must impose a fine in all cases, "except where the defendant establishes that he is unable to pay and is not likely to become able to pay any fine."[35] In determining the amount of the fine, a judge is expressly directed to consider "the burden that the fine places on the defendant and his dependents relative to alternative punishments"[36] and "any . . . pertinent equitable considerations."[37] In the case of fines, then, the court is not only *permitted* to consider the personal characteristics of a defendant, but is *commanded* to consider them. The Sentencing Commission's usual fear of disparity is muted. In addition, even if a large fine is imposed, judges are required to apply the Sentencing Guidelines for prison time as they would have otherwise.[38]

> [T]here will never be a return to truly indeterminate sentencing. The Guidelines have dramatically changed the way judges and parties think about sentencing; it has created a common vocabulary in terms of which we can compare cases and like or unlike defendants. I, along with all of the other judges who have declared the Guidelines as a whole unconstitutional under *Blakely*, will recognize and surely be guided by their provisions.

Id.

[34] *Booker*, 125 S. Ct. at 770.

[35] U.S. SENTENCING GUIDELINES MANUAL § 5E1.2(a) (2006).

[36] *Id.* § 5E1.2(d)(3).

[37] *Id.* § 5E1.2(d)(8).

[38] There is nothing permitting a departure from the Guidelines on the basis of payment of a fine or an adjustment in the offense level to reflect fine payment. However, the Guidelines provide that fines should be imposed in a manner such that the "combined sentence" reflects the seriousness of the offense. *Id.* § 5E1.2(d)(1). Of course, the judge retains discretion within the confines of calculating the offense level and sentencing within the range.

If a defendant is ordered to pay a fine, that fine is calculated by reference to the Fine Table found at Section 5E1.2(c)(3) of the Sentencing Guidelines (Figure 1).

Figure 1

Guidelines for Fines

§5E1.2. Fines for Individual Defendants

(a) The court shall impose a fine in all cases, except where the defendant establishes that he is unable to pay and is not likely to become able to pay any fine.

(b) The applicable fine guideline range is that specified in subsection (c) below. If, however, the fuideline for the offense in Chapter Two provides a specific rule for imposing a fine, that rule takes precedence over subsection (c) of this section.

(c) (1) The minimum of the fine guideline range is the amount shown in column A of the table below.

(2) Except as specified in (4) below, the maximum of the fine guideline range is the amount shown in column B of the table below.

(3) Fine Table

Offense Level	A Minimum	B Maximum
3 and below	$100	$5,000
4-5	$250	$5,000
6-7	$500	$5,000
8-9	$1,000	$10,000
10-11	$2,000	$20,000
12-13	$3,000	$30,000
14-15	$4,000	$40,000
16-17	$5,000	$50,000
18-19	$6,000	$60,000
20-22	$7,500	$75,000
23-25	$10,000	$100,000
26-28	$12,500	$125,000
29-31	$15,000	$150,000
32-34	$17,500	$175,000
35-37	$20,000	$200,000
38 and above	$25,000	$250,000

The Fine Table is trumped only when "the defendant is convicted under a statute authorizing (a) a maximum fine greater than $250,000, or (b) a fine for each day of violation."[39] In those cases a court "may impose a fine up to the maximum authorized by statute."[40] The range of fines in each cell of the Fine Table is remarkably broad. For example, the fine range for an offense level of 4 to 5 is between $250 and $5,000, and the fine range for an offense level of 18 to 19 is between $6,000 and $60,000. In general, the sentencing judge assesses fines after the probation officer (an officer of the court who advises the judge on the appropriate level of sentence) investigates the offender's financial situation.[41] Fines can also be incorporated into a plea bargain.

C. SENTENCING DISPARITIES AND THE GUIDELINES

The Guidelines were implemented primarily to reduce unwarranted sentencing disparities. However, post-Guidelines studies find that irrelevant factors such as race and sex continue to affect sentencing. David Mustard conducted one of the most comprehensive studies of sentencing under the Guidelines.[42] Mustard found that unexplained race, sex, and income disparities in length of prison sentence exist even after accounting for an offender's position in the Guidelines sentencing grid (explained in greater detail below), offense type, education, and age.[43] While Mustard found that much of the racial disparity was due to departures from the Guidelines, he found that blacks sentenced under the Guidelines still had an average prison sentence more than two months longer than similarly situated whites.[44] In addition to studying the length of sentence, Mustard also found that (1) whites were more likely to receive a sentence of no prison term than similarly situated blacks and Hispanics, and that (2) they were also more likely to receive a downward departure. Women fared better than men in all specifications.

Apart from Mustard, a number of other post-Guideline studies have also found racial disparities. Celesta Albonetti, examining only drug

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[39] *Id.* § 5E1.2(c)(4).

[40] *Id.*

[41] The Guidelines authorize the judge to consider the ability to pay a fine and the impact of a fine on the offender's dependents and ability to pay restitution. *See generally* 18 U.S.C. § 3572 (2000).

[42] David B. Mustard, *Racial, Ethnic, and Sex Disparities in Sentencing: Evidence from the U.S. Federal Courts*, 44 J.L. & ECON. 285 (2001).

[43] *Id.* at 299-305. This disparity was present for nearly all types of offenses, but ranged from almost 10.5 months for drug trafficking to 0.91 months for fraud. *Id.* at 306 tbl.8.

[44] *Id.* at 297 tbl.6.

offenders in 1991-92, found that blacks, men, and those with lower educations received longer sentences.[45] Douglas McDonald and Kenneth Carlson concluded that disparities between blacks and whites increased after the Guidelines, but that these differences were largely due to the policy choices of the Sentencing Commission, not the biases of prosecutors or judges.[46] This finding, of course, is in contrast to Mustard's later conclusion that most of the disparity between blacks and whites was due not to the policy choices embedded in the Guidelines, but to departures from the Commission's strictures.[47]

While important, these studies fail to identify the source of the sentencing disparity. A racial disparity could arise because of prejudiced prosecutors and judges, but other sources are possible as well. For example, wealth, quality of legal counsel, and the seriousness of the crime may not be fully controlled for and these factors may be correlated with race. To directly address whether judges are at the root of racial disparities, Schanzenbach examined whether racial disparities were correlated with judicial characteristics.[48] He was unable to identify the actual sentencing judge, so his study used variation in the percent Democrats, black, Hispanic, and female judges at the district level.[49] He found no consistent correlations between any of these judicial characteristics and racial disparities, and concluded that it is unlikely that judges are the primary cause of racial disparities in sentencing.[50]

In addition to racial disparities, the literature has also focused on inter-judge disparities: in other words, how much do individual judges matter? The literature is divided as to whether inter-judge disparities increased or decreased after the Guidelines. Hofer et al. have argued that the Guidelines decreased inter-judge sentence disparities.[51] Anderson et al. found a

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[45] Celesta A. Albonetti, *Sentencing under the Federal Sentencing Guidelines: Effects of Defendant Characteristics, Guilty Pleas, and Departures on Sentence Outcomes for Drug Offenses, 1991-1992*, 31 LAW & SOC'Y REV. 789, 817 (1997).

[46] DOUGLAS C. MCDONALD & KENNETH E. CARLSON, BUREAU OF JUSTICE STATISTICS, SENTENCING IN THE FEDERAL COURTS: DOES RACE MATTER? 177 (1993).

[47] Mustard, *supra* note 42, at 311-12.

[48] Max Schanzenbach, *Racial and Sex Disparities in Prison Sentences: The Effect of District-Level Judicial Demographics*, 24 J. LEGAL STUD. 57 (2005).

[49] *Id.* at 65.

[50] There were some differences within particular crime categories. For example, Schanzenbach found that black white-collar offenders were sentenced more lightly in districts with more black judges. There was some evidence that having more Hispanic judges reduced sentences for black and Hispanic drug offenders, but no similar effect was found for having more black judges. *Id.* at 80-81.

[51] Paul J. Hofer et al., *The Effect of the Federal Sentencing Guidelines on Inter-judge Sentencing Disparity*, 90 J. CRIM. L. & CRIMINOLOGY 239, 240 (1999).

decrease in inter-judge disparities in sentence length after the Guidelines, yet argued that the advent of mandatory minimum sentences for drug offenses might have contributed to the decline.[52] On the other hand, Lacasse and Payne found that the Guidelines made no difference. In a unique approach, they measured inter-judge disparity by examining whether plea bargains changed after the Guidelines.[53] If inter-judge disparities truly decreased under Guidelines, Lacasse and Payne reasoned, the judge assigned to a case should have less influence on the decision to plea and on the substance of the plea agreement than she did before.[54] Yet Lacasse and Payne found the contrary: the judge assigned to a case influenced plea decisions as much after the Guidelines as before.[55] Schanzenbach and Tiller have recently shown that Democrats give lighter sentences than Republicans in the case of violent and drug crimes, and that these differences increase when circuit courts are aligned (in other words, Democrats in a Democratic circuit give lower sentences than Democrats in a Republican circuit).[56] These findings, taken together, are consistent with the notion that judges still have substantial discretion under the Sentencing Guidelines.

Our paper contributes to the disparity literature by examining racial disparities in the sentencing of white-collar criminals. Despite the abundance of disparity studies since the Guidelines were enacted, none have focused on white-collar crime in particular.

Those studies that have examined white-collar crime have merely included it in a larger study without detailed comment or investigation. This is a significant gap in the literature because white-collar crime has a few traits that make it an especially fertile source of insight into sentencing.

First, because fines are used against those who are convicted of white-collar crime more often than those who are convicted of violent crimes, drug crimes, or immigration crimes, white-collar crime offers an opportunity to examine the use of fines and their effect on prison sentence disparities. This feature of white-collar crime is especially pertinent

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[52] James M. Anderson et al., *Measuring Interjudge Sentencing Disparity: Before and After the Federal Sentencing Guidelines*, 42 J.L. & ECON. 271, 273 (1999).

[53] Chantale Lacasse & A. Abigail Payne, *Federal Sentencing Guidelines and Mandatory Minimum Sentences: Do Defendants Bargain in the Shadow of the Judge?*, 42 J.L. & ECON. 245 (1999).

[54] *Id.* at 247-50.

[55] *Id.* at 267-68.

[56] Max Schanzenbach & Emerson Tiller, *Strategic Judging under the Sentencing Guidelines: Positive Political Theory and Evidence*, 23 J.L. ECON. & ORG. (forthcoming spring 2007).

because law and economics scholars have championed fines as a cheaper alternative to imprisonment.[57]

Second, some notable empirical work on federal sentencing before the Guidelines has focused on white-collar crime.[58] White-collar crime therefore provides a place for comparison between the pre- and post-Guidelines world.

Third, if there is disparity in the sentencing of white-collar crime, bias might be more plausibly ascribed to judges or prosecutors than in other types of crimes. Legislators and police have not exercised as much influence over white-collar crime as they do over other types of crime, leaving prosecutors and judges with more discretion.[59] Anti-drug criminal

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[57] The seminal article is Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169, 193 (1968) (contending that "social welfare is increased if fines are used whenever feasible"). For a concise overview, see RICHARD A. POSNER, THE ECONOMIC ANALYSIS OF LAW § 7.2 (5th ed. 1998).

[58] The most influential studies—and justly so—are probably those conducted under the direction of Stanton Wheeler and published in book form as the Yale Studies on White-Collar Crime. The quantitative work is published in various books and articles (the articles being essentially preliminary findings), including DAVID WEISBURD ET AL., WHITE-COLLAR CRIME AND CRIMINAL CAREERS (2001); DAVID WEISBURD ET AL., CRIMES OF THE MIDDLE CLASSES: WHITE-COLLAR OFFENDERS IN THE FEDERAL COURTS (1991) [hereinafter WEISBURD ET AL., CRIMES OF THE MIDDLE CLASSES]; David Weisburd et al., *Class, Status and the Punishment of White-Collar Criminals*, 15 LAW & SOC. INQUIRY 223 (1990); Stanton Wheeler et al., *White Collar Crimes and Criminals*, 25 AM. CRIM. L. REV. 331 (1988); and Stanton Wheeler et al., *Sentencing the White-Collar Offender: Rhetoric and Reality*, 47 AM. SOC. REV. 641 (1982) [hereinafter Wheeler et al., *Sentencing the White-Collar Offender*]. In addition to their quantitative work, the Yale researchers also published three other books, the most pertinent to this Paper being STANTON WHEELER ET AL., SITTING IN JUDGMENT: THE SENTENCING OF WHITE-COLLAR CRIMINALS (1988), which summarizes and discusses extensive interviews of federal district court judges. Other researchers (that is, researchers outside the Yale project) have also conducted useful quantitative studies. *See, e.g.*, Michael L. Benson & Esteban Walker, *Sentencing the White-Collar Offender*, 53 AM. SOC. REV. 294 (1988) (in-depth study of a single federal district court in a Midwestern state); John Hagan & Ilene Nagel, *The Differential Sentencing of White Collar Offenders in Ten Federal District Courts*, 45 AM. SOC. REV. 802 (1980); John Hagan & Patricia Parker, *White-Collar Crime and Punishment: The Class Structure and Legal Sanctioning of Securities Violations*, 50 AM. SOC. REV. 302 (1985) (examining securities violations in Canada); Ilene H. Nagel & John Hagan, *The Sentencing of White-Collar Criminals in Federal Courts: A Socio-legal Exploration of Disparity*, 80 MICH. L. REV. 1427 (1982); Ilene H. Nagel & John L. Hagan, *White-Collar Crime, White-Collar Time: The Sentencing of White-Collar Offenders in the Southern District of New York*, 20 AM. CRIM. L. REV. 259 (1982).

[59] For example, there are no mandatory minimum sentences in the case of federal white collar crimes, but mandatory minimums are common in drug crimes. For a discussion of how this may contribute to disparity between crimes post-Booker, see M.K.B. Darmer, *The Federal Sentencing Guidelines After* Blakely *and* Booker*: The Limits of Congressional Tolerance and a Greater Role for Juries*, 56 S.C. L. REV. 533, 565 (2005). Post-Enron, Congress has shown a greater willingness to tinker with white collar crime. *See* Sarbanes-

law provides an illustrative contrast. Defendants sentenced for possessing or trafficking in crack cocaine are disproportionately black,[60] and possession and distribution of crack is punished much more severely than possession and distribution of powdered cocaine.[61] There is no obvious legislative thumb on the scale creating this kind of racial disparity in white-collar crime. Likewise, because credit card, bank, and securities fraud are likely to be reported by victims or institutions instead of resulting from sting operations, police may exert less control over the investigations and arrests of white-collar criminals than they do violent criminals or drug criminals. Investigations and arrests of white-collar criminals spring from victim complaints more often than from beat-cop observations, and complaints may be investigated by prosecutors before the police ever make an arrest.[62] In fact, the complaints may be made directly to prosecutors, bypassing the police entirely until the prosecutors decide they have enough evidence to make an arrest, and only then do the police show up and arrest the fraudster.[63]

III. PREVIOUS WORK ON FINES AND PRISON TIME

There is a large amount of theoretical literature on fines, particularly on optimal fines and the trade-off between prison and fines.[64] The

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Oxley Act of 2002, Pub. L. 107-204, §§ 902-06, 116 Stat. 745 (enhancing penalties for white collar crime); § 805 (directing the Commission to amend the Guidelines to ensure that the punishments for obstruction of justice are "sufficient to deter and punish that activity"). These amendments are not covered by the time span of the sample.

[60] *See* Carol A. Bergman, *The Politics of Federal Sentencing on Cocaine*, 10 FED. SENT'G REP. 196, 196 (1998) ("In 1993, 88.3 percent of those sentenced for trafficking crack were African American; 4.1 percent were white.").

[61] For example, "a ten-year mandatory minimum sentence is triggered by trafficking fifty grams of crack, but one must traffic five thousand grams of powder cocaine to trigger the same sentence." *Id.*

[62] WEISBURD ET AL., CRIMES OF THE MIDDLE CLASSES, *supra note* 58, at 97 tbl.5.1. The data are from the 1980s, but conform to common intuition: fraud and embezzlement cases are usually detected because of reports by victims or employers (with securities fraud being an exception). *Id.* In fact, victim/employer complaints or "routine audits or investigations" detect nearly 80% of white collar crimes prosecuted. *Id.*

[63] Some white-collar crimes, however, such as tax crimes, might resemble street crime in that they are initially investigated by tax officials who are not prosecutors and are therefore only selectively referred for prosecution. These types of white collar-crime therefore resemble street crime in that they have another level where bias can creep in.

[64] *See, e.g.*, POSNER, *supra* note 57, at 244-48; James Andreoni, *Reasonable Doubt and the Optimal Magnitude of Fines: Should the Penalty Fit the Crime?*, 22 RAND J. ECON. 285 (1991); David D. Friedman, *Reflections on Optimal Punishment; or, Should the Rich Pay Higher Fines?*, 3 REV. L. & ECON. 185 (1981); Louis Kaplow, *The Optimal Probability and Magnitude of Fines for Acts that Definitely Are Undesirable*, 12 INT'L REV. L. & ECON. 3

theoretical literature goes far beyond the scope of this paper. There is, however, an important argument from the law and economics literature that fines are an underused form of punishment.[65] If a defendant is not judgment-proof, fines are a comparatively inexpensive way to deter and punish because imprisonment, the most likely alternative, is so costly to society. This may lead to inequitable prison sentences between rich and poor, but, the argument goes, so long as fines are severe enough, the actual level of punishment should be equated. We consider the relevance of this argument in greater detail when we discuss our results.

We are aware of three detailed quantitative[66] studies on fines and imprisonment in the United States, all of which examine only pre-Guidelines cases. Joel Waldfogel used pre-Guidelines sentencing data to determine whether or not judges traded prison time for fines in white-collar cases.[67] He concluded that there was strong evidence that courts (or possibly prosecutors in plea bargains) "traded" fines for prison time,

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(1992); Steven. D. Levitt, *Incentive Compatibility Constraints as an Explanation for the Use of Prison Sentences Instead of Fines*, 17 INT'L REV. L. & ECON. 179 (1997); John R. Lott, *Should the Wealthy Be Able to "Buy Justice"?*, 95 J. POL. ECON. 1307 (1987); A. Mitchell & Daniel Rubinfeld, *A Model of Optimal Fines for Repeat Offenders*, 46 J. PUB. ECON. 291 (1991); A. Mitchell Polinsky & Steven Shavell, *A Note on Optimal Fines When Wealth Varies Among Individuals*, 81 AM. ECON. REV. 618 (1991); A. Mitchell Polinsky & Steven Shavell, *The Optimal Tradeoff Between the Probability and Magnitude of Fines*, 69 AM. ECON. REV. 880 (1979); A. Mitchell Polinsky & Steven Shavell, *The Optimal Use of Fines and Imprisonment*, 24 J. PUB. ECON. 89 (1984); Steven Shavell, *Specific Versus General Enforcement of Law*, 99 J. POL. ECON. 1088 (1991); George Stigler, *The Optimum Enforcement of Laws*, 78 J. POL. ECON. 526 (1970); *cf.* Becker, *supra* note 57, at 169 (developing a "market model" of crime); Isaac Ehrlich, *Crime, Punishment, and the Market for Offenses*, 10 J. ECON. PERSP. 43 (1996) (same, with a useful bibliography on economic models of crime); Ann D. Witte, *Estimating the Economic Model of Crime with Individual Data*, 94 Q. J. ECON. 57 (1980) (same).

[65] *See, e.g.*, POSNER, *supra* note 57, at 244-48 (suggesting that the best way to get convicts to pay fines is to impose heavy non-pecuniary sanctions as alternatives).

[66] We found a fourth study which could be described as empirical, but not quantitative: SALLY T. HILLSMAN ET AL., U.S. DEP'T OF JUSTICE, FINES IN SENTENCING: A STUDY OF THE USE OF THE FINE AS A CRIMINAL SANCTION (1984). Hillsman and her colleagues provide valuable information on sentencing practices in the federal and state courts, as well as courts of foreign jurisdiction. They present the state of the law as captured in statutes and case law, and they also researched ongoing practice by conducting "a national telephone survey of one hundred twenty-six courts in twenty-one states; on-site visits to thirty eight courts of various types in seven states; and an in-depth, case record study of fine use and collection in New York City's five limited and five general jurisdiction courts." *Id.* at 10. However, Hillsman and her colleagues did not analyze disparities in race, socio-economic class, or sex, or conduct much quantitative research beyond tallying fine amounts. Although the study is related to the questions posed in this Article, it is not directly responsive.

[67] Joel Waldfogel, *Are Fines and Prison Terms Used Efficiently? Evidence on Federal Fraud Offenders*, 39 J.L. & ECON. 107 (1995).

particularly for wealthier defendants. When defendants were poorer, judges imposed a mix of fines and imprisonment. As part of the Yale studies on white collar crime, David Weisburd, Stanton Wheeler, Elin Waring and Nancy Bode also studied pre-Guidelines sentencing data, and while their study did not consider whether fines were traded for prison time, they did find that fines depend on net worth, which is consistent with Waldfogel's result.[68] John Lott, in another pre-Guidelines study, also found that fines correlate to income. Lott did not, however, find a significant relationship between income and prison terms.[69] Waldfogel suggests that this discrepancy between his study and Lott's may be due to Lott's much smaller sample size.[70]

It is possible, however, that the Guidelines have changed some of the conditions Waldfogel observed. Specifically, they seem to have reduced the ability of judges to impose fines in lieu of imprisonment—in at least three ways. First, the Guidelines do not permit judges to use fines as an independent sanction unless a defendant is in "Zone A" of the Sentencing Table.[71] In all other cases fines must be coupled with some form of detention. Second, fines do not justify departures from the Guidelines, although judges still have some sentencing room within the Guidelines. Third, the Guidelines increased the mandatory prison sentences for white-collar crimes, and departures from these sentences are subject to appellate review.

IV. DATA AND METHOD

A. THE DATA

The data used are collected and maintained by the Office of Policy Analysis of the Sentencing Commission.[72] The judicial terms 1992-93 through 2000-2001 are examined. Earlier judicial terms are not used because they contain a large number of pre-Guidelines cases. In this period

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[68] WEISBURD ET AL., CRIMES OF THE MIDDLE CLASSES, *supra* note 58, at 150-57 (discussing the fines results and observing that "[t]hose with the most money available are most likely to be fined").

[69] John R. Lott, *Do We Punish High Income Criminals Too Heavily?*, 30 ECON. INQUIRY 583 (1992).

[70] Waldfogel, *supra* note 67, at 131.

[71] See the commentary section of U.S. SENTENCING GUIDELINES MANUAL § 5E1.2 cmt. (2006) ("A fine may be the sole sanction if the [G]uidelines do not require a term of imprisonment.").

[72] We obtained the data from the website of the Inter-University Consortium for Political and Social Research, http://www.icpsr.umich.edu (last visited Mar. 28, 2006).

105,917 people were sentenced under the Guidelines for white-collar offenses, which we define as fraud, embezzlement, forgery/counterfeiting, bribery, tax offenses, and money laundering.[73] We forgo examining later cases because of the increased prominence of white collar crimes after 2001, the introduction of the Feeney Amendment in 2003, and *Booker*.

Eliminating those for whom necessary variables (age, race, fine amount, prison sentence, etc.) were missing reduced the sample by about 9,000 offenders for a total of 97,208. When we refer to the "full sample" this culled data is the number we mean. The culled data are quite detailed, and include the offenders' education, race, exact sentencing grid position, offense level, and criminal history. The Office of Policy Analysis only collected income data between 1991-92 and 1993-94. Income data is still collected by probation officers and included in the Pre-Sentencing Reports ("PSRs") given to the sentencing judge, but after 1994 the Office of Policy Analysis dropped the income variable as too unreliable. Thus, when income is used in our analysis, the sample size is reduced from 97,208 to 22,208.

Table 1 presents the means and percentages of descriptive variables in the sample. When means are reported, the standard error is included below the mean in parentheses. The first thing to note is that non-whites make up roughly 45% of the sample. This is sufficient representation to allow us to identify any disparities between different ethnic groups. In addition, only 57% of those convicted receive prison time, and 24% receive downward departures from the Guidelines.

Nearly 94% of the cases were resolved in plea bargains. The use of pleas is important to any interpretation regarding where racial discrepancies originate. Bias can enter the system at the judicial level or via the prosecutors, who have a great deal of discretion regarding what cases to bring, the level of the offense, and what to agree to in a plea bargain.[74]

B. THE METHODOLOGY

Three different measures are used to estimate the severity of the punishment: length of sentence in months, whether any prison time was imposed, and whether a downward departure was made. When the length of prison sentence is the dependent variable, the equation is estimated as a

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[73] We are therefore adhering to the definition of white-collar crime offered by Herbert Edelhertz: "[A white-collar crime is] an illegal act or series of illegal acts committed by nonphysical means and by concealment or guile, to obtain money or property, or to obtain business or personal advantage." HERBERT EDELHERTZ, U.S. DEP'T OF JUSTICE, THE NATURE, IMPACT AND PROSECUTION OF WHITE COLLAR CRIME 3 (1970).

[74] *See* STITH & CABRANES, *supra* note 3, at 105.

tobit because 42% of the sample received a prison sentence of zero months. The estimated equation takes the form:

Equation 1:

$$(1)\text{Sentence}_{ijt} = \alpha\text{Race}_{ijt} + \pi X_{ijt} + \theta\text{Guideline}_{ijt} + \delta\text{District}_{jt} + \beta\text{Term}_{t} + \omega\text{Offtype}_{ijt} + \beta\text{TrialType}_{ijt} + \varepsilon_{ijt}$$

Here, *i* indexes individual, *j* indexes district, and *t* indexes judicial term. Epsilon (ε) is the error term. *Race* is a vector of racial dummy variables (white being the excluded category); *X* is a vector of demographic characteristics including age, education, sex, citizenship status, and the number of dependents. *Guideline* is a matrix of dummy variables indicating where precisely the convict falls in the sentencing grid. Thus, there is a dummy variable for each box of the grid (following Mustard's approach). This technique should control simultaneously for offense level, criminal history, and any offense level adjustments. *District* is a matrix of dummy variables for judicial district (e.g., the Southern District of New York, the Eastern District of Texas) and *Term* is a matrix of dummy variables for judicial term. *Offtype* is a matrix of dummy variables accounting for the offense type (e.g., fraud versus tax). *TrialType* are dummy variables accounting for whether there is a plea, jury or bench trial, with plea being the excluded category. Restitution is required under the Guidelines when possible and is entered as a quadratic. It may influence the amount of the fine paid and also helps control for the severity of the offense (the amount of restitution is positively correlated with prison sentence).

Table 1

Means and Proportions (Standard Errors in Parentheses)

Variable	Mean or Proportion
Total Prison Sentence	11.34 (21.32)
Prison Time Given	58 %
Sentence Within Range	76 %
Downward Departure	24 %.
Downward Departure (Substantial Assistance)	14 %
Downward Departure (Judge Initiated)	8 %
Upward Departure	.88 %
Age	38.52 (11.99)
Male	64 %
Female	27 %

Table 1 (continued)

Means and Proportions (Standard Errors in Parentheses)

Variable	Mean or Proportion
White	54 %
Black	29 %
Hispanic	11 %
Asian	4 %
Other	1 %
Citizen	88 %
Jury	6 %
Bench	.098 %
Less than High School	29 %
High School	55 %
College	12 %
Advanced Degree	5 %
No Dependents	38 %
One Dependent	21 %
Two Dependents	18 %
Three or more Dep.	23 %
N	97,208

Next, we used a probit specification on whether or not a prison sentence was imposed. Probits are used when the dependent variable takes on zero or one, and they allow us to measure how various traits affect the probability of observing the punishment.

Equation 2:

$$(2)\Pr(\text{Any Pris}_{ijt}) = \varphi\text{NoPrisPoss}_{ijt} + \alpha\text{Race}_{ijt} + \pi X_{ijt} + \theta\text{Guideline}_{ijt} + \delta\text{District}_{jt} + \beta\text{Term}_{t} + \omega\text{Offtype}_{ijt} + \beta\text{TrialType}_{ijt} + \varepsilon_{ijt}$$

Any Pris takes on the value 1 when a positive prison sentence was imposed and zero otherwise. The other variables remain as before, with the addition of *NoPrisPoss*, which is a dummy variable taking on the value 1 if the Guidelines permit a prison sentence of zero months, and 0 otherwise. All coefficients are reported as marginal effects, taking the other variables at their means.

Finally, downward departures are considered:

Equation 3:

$$(3)\Pr(\text{DownwrdDept}_{ijt}) = \alpha\text{Race}_{ijt} + \pi X_{ijt} + \theta\text{Guideline}_{ijt} + \delta\text{District}_{jt} + \beta\text{Term}_{t} + \omega\text{Offtype}_{ijt} + \beta\text{TrialType}_{ijt} + \varepsilon_{ijt}$$

Downwrd Dept takes on 1 if the judge imposes a sentence less than the Guidelines recommend and 0 otherwise. The sample excludes cases in which downward departure is impossible (because the Guidelines already permit a sentence of no prison time).

C. THE IDENTIFICATION AND INTERPRETATION OF UNEXPLAINED RACIAL DISPARITIES

The coefficients on racial dummy variables must be interpreted cautiously. Unobservable factors that are correlated with race and the dependent variable (sentence length) can cause a racial dummy variable to be statistically significant even if there is no "true" discrimination. If those unobservable factors are legally relevant considerations in sentencing, such as unaccounted victim harm or the dangerousness of the convict then "true" racial bias in sentencing may not exist.

The economics literature gives one a flavor of the difficulty in linking racial disparities to discrimination or a particular form of discrimination. Large wage disparities are found between blacks and whites. Wage disparities, albeit much smaller in magnitude, are also found between white ethnic groups.[75] Discrimination between white ethnic groups is a dubious explanation for these disparities. In addition, whether or not wage disparities between blacks and whites are the result of bias in the labor market, or earlier discrimination in schooling, health care, and other human capital investments is controversial and difficult to identify empirically.[76] Racial disparities in hiring are easier to trace because they are open to randomized experiments. For example, a recent study using traditionally black names on applications and race neutral names on others (but with equivalent credentials) found that applicants with black names were much less likely to receive an interview.[77] This is strong evidence of racial bias in

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[75] For a recent treatment, see George J. Borjas, *Ethnicity, Neighborhoods, and Human Capital Externalities*, 85 AM. ECON. REV. 365 (1995).

[76] For a recent discussion, see Pedro Carneiro et al., *Labor Market Discrimination and Racial Differences in Premarket Factors*, 48 J.L. & ECON. 1 (2005).

[77] Marianne Bertrand & Senhil Mullainathan, *Are Emily and Brendan More Employable than Latoya and Tyrone? Evidence on Racial Discrimination in the Labor Market from a Large Randomized Experiment*, 94 AM. ECON. REV. 991 (2004).

the labor market, but unfortunately we cannot employ a similar methodology when it comes to sentencing.

Another example of the problem of interpreting racial disparities comes from examinations of the mortgage market. A number of studies have found that blacks are more likely than similarly situated whites to be rejected for home loans.[78] A widely noted contradiction, however, is that blacks are actually slightly *more* likely to default on home loans. If blacks truly faced greater hurdles in borrowing due to discrimination, then, presumably, only blacks that were especially low credit risks would be lent money, thereby producing a *lower* default rate for black borrowers.[79] How can these disparate results be explained? The seeming contradiction is actually consistent with at least two different interpretations. The first is that there are some characteristics that are correlated with race yet which independently contribute to loan risk, and the bank observes these characteristics but the econometrician does not. The bank is not discriminating on the basis of race in this scenario. Another possibility, however, is that lenders observe what the econometrician observes but engage in "rational discrimination," meaning that they have an idea of which unobserved risk factors are correlated with race, but cannot observe them directly, and so they consciously take account of race in order to avoid these unobservable factors.[80]

The point of this discussion is simply to emphasize that the source of racial biases must be investigated very carefully and all possible interpretations of the outcomes considered. Independent factors correlated with race must somehow be ruled out.

V. THE RESULTS

Table 2 begins the analysis by presenting raw averages by race for some relevant variables. However, these are unadjusted averages that do not control for a variety of factors such as offense level, criminal history and crime category. They are merely taken as a starting point for the discussion.

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[78] *See, e.g.*, Alicia Mundell et al., *Mortgage Lending in Boston: Interpreting HMDA Data*, 86 AM. ECON. REV. 25 (1996).

[79] *See* Helen Ladd, *Evidence on Discrimination in Mortgage Lending*, 12 J. ECON. PERSP. 41 (1998).

[80] For an excellent treatment of the difficulty in identifying the source of a racial disparity, see IAN AYRES, PERVASIVE PREJUDICE? 45-87 (2001).

Table 2

Variables by Race and Fine Status

	White	Black	Hispanic
Average Prison Sentence	11.47 (20.08)	10.28 (19.29)	12.83 (22.42)
Average Prison Sentence (if fined)	8.09 (18.56)	7.16 (16.98)	12.09 (24.02)
Average Prison Sentence (if not fined)	12.67 (21.14)	10.85 (19.16)	13.08 (21.09)
Downward Departures	27%	18%	25%
Prison Time	57%	55%	61%
Income<10K	31%	52%	47%
Income between 10K and 20K	23%	26%	26%
Income between 20K and 35K	16%	11%	13%
Income>35K	30%	9%	14%
Any Fine Paid	26%	16%	19%
Amount of Fine (if any)	$10,793 (38,266)	$2,850 (11,547)	$6,522 (27,062)
N	62,322	28,077	10,049

On average, prison sentences for all groups in the sample are low: between 10 and 13 months. No sizeable racial disparities are evident based on the raw data. Blacks in the sample have lower average prison sentences than whites and are no more likely to be incarcerated. They are much less likely to be granted downward departures, however, and this difference was significant at less than the 1% level. Hispanics receive longer average prison sentences than whites (1.36 months longer), but are given prison time and downward departures at a comparable rate.

The starkest finding is that prison time is less for those who pay a fine versus those who pay no fine, and these differences are all statistically significant at the 1% level. We do not formally consider the effect of fines on prison time, as other studies have, but these averages provide some evidence that the amount of prison time is in part determined by the fine.

The income data, a subset of the full data, are provided for comparison purposes. Although whites in the sample are clearly wealthier as a group than blacks and Hispanics in the sample, all offenders in the sample tend to

have low incomes irrespective of their race. For example, 70% of whites make less than $35,000 per year, and only 46% of whites make more than $20,000 per year.

A. DISPARITIES BY DEMOGRAPHIC GROUP: DEPENDENTS, EDUCATION, AGE, U.S. CITIZENSHIP, FEMALE SEX, AND BEING WHITE ASSOCIATED WITH LOWER PRISON TERM

Table 3 presents tobit estimates of Equation 1. In each of these regressions, the dependent variable is total prison sentence in months. Tobits are run to account for the large number of zero prison sentences. The sample is subdivided in a number of ways: first, the full sample is used, then the sample is divided between fine payers and non-fine payers, and then we reestimate Equation 1 using the income sample. Finally, we consider the effect of controlling for base offense level instead of final offense level on the estimated race and sex disparities.

Table 3

Tobits on Total Prison Sentence

Variable	1 Full Sample	2 No Fine	3 Fine Payers	4 Income Sample	5 Income Sample	6 Base Level Controls
Black	.98***	.63***	1.83***	1.43***	.93**	-2.00***
	(.13)	(.14)	(.38)	(.23)	(.23)	(.19)
Hispanic	1.11***	.63***	2.36***	1.74***	1.37**	-.87***
	(.21)	(.23)	(.53)	(.61)	(.60)	(.31)
Asian	-.58*	-.64*	.054	1.26	1.05*	-1.82***
	(.30)	(.34)	(1.28)	(.82)	(.54)	(.54)
Other	.33	.072	-.43	.72	.089	-1.36*
	(.54)	(.59)	(1.41)	(1.72)	(1.07)	(.77)
Citizen	-4.40***	-4.568***	-3.05***	-3.72***	-3.00***	-4.30***
	(.19)	(.20)	(.46)	(.51)	(.51)	(.51)
Male	2.72***	2.84***	3.06***	3.98***	4.18***	6.22***
	(.13)	(.14)	(.39)	(.36)	(.35)	(.19)
Age	.29***	.27***	.36***	.47***	.58***	.80***
	(.029)	(.032)	(.071)	(.083)	(.079)	(.042)
Age Squared/ 100	-.42***	-.39***	-.40***	-.64***	-.72***	-.87***
	(.032)	(.042)	(.082)	(.091)	(.091)	(.041)
Restitution/ 10000	.53***	.047***	.74***	.13***	.12***	.24***
	(.043)	(.0027)	(.089)	(.0080)	(.0080)	(.0037)
Restitution Squared/ 10000	-.59xe-7***	-.51xe-8***	-.98xe-8***	-.15e-8***	-.15e-8***	-.15e-8***
	(.44e-9)	(.72e-9)	(.92e-9)	(.13e-9)	(.13e-9)	(.13e-9)

Table 3 (continued)

Tobits on Total Prison Sentence

Variable	1 Full Sample	2 No Fine	3 Fine Payers	4 Income Sample	5 Income Sample	6 Base Level Controls
Income<10K					6.19***	
					(.41)	
Income between 10K and 20K					1.19***	
					(.43)	
Income between 20K and 35K					1.25**	
					(.63)	
No Dependents	1.38***	1.40***	1.11***	1.48***	.38	.95***
	(.19)	(.35)	(.35)	(.51)	(.50)	(.28)
One Dependent	.51**	.67*	.28	.22	-.012	.29
	(.21)	(.37)	(.51)	(.51)	(.53)	(.30)
Two Dependents	-.002	.015	-.052	-.46	-.71	-.14
	(.21)	(.23)	(.52)	(.54)	(.54)	(.30)
Three Dependents	-.26	-.19	-.54	-.32	-.29	-48
	(.22)	(.25)	(.55)	(.57)	(.56)	(.32)
High School	-1.39***	-1.20***	-1.61***	-.94***	-.38	.10
	(.13)	(.13)	(.34)	(.34)	(.35)	(.18)
College	-1.82***	-1.41***	-2.39***	-1.68***	-.79*	1.39**
	(.19)	(.22)	(.45)	(.43)	(.48)	(.28)
Advanced	-1.74***	-1.44***	-1.83***	.83	-1.53**	2.53**
	(.27)	(.31)	(.56)	(.68)	(.67)	(.39)
Trial	9.53***	9.14***	12.31***	14.45***	14.47***	14.47***
	(.22)	(.38)	(.47)	(.53)	(.52)	(.52)
Sample Size	97,208	75,138	22,070	22,208	22,208	96,556

Standard errors in parentheses. Total Prison Sentence in months is the dependent variable. All regressions include dummy variables for sentencing grid position, offense type, judicial term, and district.

*Coefficient statistically significant at the 10% level.

**Coefficient statistically significant at the 5% level.

***Coefficient statistically significant at the 1% level.

Column 1 in Table 3 estimates Equation 1 using the full sample. A number of legally irrelevant or discouraged factors are correlated with the length of the sentence, even after accounting for the offender's position in the sentencing grid, type of offense, district court, and judicial term. Having more dependents, higher levels of education, being older, U.S.

citizenship, being female, and being white are all associated with lower prison terms. For example, having no dependants (versus having three or more) is associated with a 1.38 month longer prison sentence. Having a high school education (versus failure to graduate) is associated with a 1.39 month shorter prison sentence.[81] Age is positively, though decreasingly, associated with a longer prison sentence. Citizens receive sentences on average 4.40 months shorter than non-citizens. As is commonly found in the sentencing disparity literature, a large unexplained sex disparity exists (and remains quite large regardless of specification). The point estimate in column 1 implies that men receive a prison sentence of an average 2.72 months longer than women.

Finally, there are unexplained differentials based on race and ethnicity. The point estimates imply that blacks receive roughly .98 months and Hispanics 1.11 months longer sentences on average than whites after accounting for all observable variables. This corresponds to roughly a 10% longer prison sentence than average. The magnitude of this disparity is not huge, but that it persists under the Guidelines is troubling. In addition, it corresponds in magnitude to estimated disparities in the case of more serious crimes, such as drug crimes.[82] Having established the existence of a racial disparity under a typical regression specification, we examine how sensitive the racial disparities to alternate specifications.

B. THE EFFECT OF FINES: PAYING TO GET OUT OF PRISON

Because judges have broad discretion over fines, we do not incorporate them directly into the analysis. As discussed, fines are likely endogenous. In other words, they are determined by the judge simultaneously with the amount of prison time and each element of the total sentence, fine and prison time, has an influence on the other. However, we have strong reasons, a priori, to suspect that fines reduce prison time and that the ability to pay a fine is correlated with race. Thus, we divide the sample into those who paid fines and those who paid no fine and consider the estimated racial disparities within the two groups. If our hypothesis is correct, the estimated racial disparity among those who pay a fine should be larger than the estimated racial disparity among those who do not pay a fine.

Columns 2 and 3 of Table 3 split the sample into those who paid no fines (Column 2) and those who paid a fine (Column 3). Among those who paid no fine, both blacks and Hispanics have .63 months longer prison

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[81] Those with less than a high school education are the excluded category in the education dummy variables.

[82] *See* Schanzenbach & Tiller, *supra* note 56, tbl.3.

sentences than whites, which are roughly two-thirds of the corresponding estimates in column 1 and represent only a 5% disparity compared to the average sentence. When racial disparities are estimated using the fine-paying sample, the estimated disparities are much larger for blacks and Hispanics. For blacks, the disparity is 1.83 months among fine payers versus .63 months among non-payers. Likewise, for Hispanics, the disparity is 2.36 months among fine payers versus .63 months among non-payers. Because the average prison sentence if fined is only eight months, the racial disparities estimated here are nearly 25% relative to the average sentence, a substantial relative and absolute increase. In sum, racial disparities are three to four times larger among fine payers than non-payers, and roughly one-third of the overall disparity among the races estimated in Column 1 is due to disparities between fine payers.

We do not interpret the larger racial disparity estimated in the fine-paying sample as evidence that those who pay fines face more discrimination. Instead, we interpret our result as evidence that whites who pay fines get out of more prison time than blacks and Hispanics who pay fines. This is likely because the more one pays, the more time is forgiven, and blacks and Hispanics tend to pay less than whites. A back-of-the-envelope calculation makes this clearer. According to Table 2, blacks who paid fines paid $8,000 less than whites who paid fines. If we ascribe all of the racial disparity among fine payers—all 1.83 months—to the extra fines paid by whites, then a white collar offender can buy out prison time at $4,371 per month.

Admittedly, this quick estimate most likely goes too far. We believe it is incorrect to ascribe the racial disparity among fine payers entirely fines. After all, a disparity exists (albeit much smaller) among those who did not. Nonetheless, it demonstrates that sentencing is a complicated process, and the size of the racial disparity can swing widely between different sub-samples. In addition, the increase in the disparity between sub samples is potentially explainable by factors other than judicial prejudice. This is not to say that the increase in the disparity is no cause for concern. That would depend on whether one thinks that the fines traded in lieu of prison are adequate and whether we could be certain that judges are charging the same "price" across racial groups, something we are not able to discern.

C. THE EFFECT OF INCOME: MORE MONEY, LESS PRISON TIME

Columns 4 and 5 of Table 3 limit the sample to the three years for which income data were collected. Column 4 is provided as a means of comparison for Column 5, and does not include income controls. As can be seen, the estimated racial disparities are a higher for the income sub sample.

The coefficient on the dummy variable for less than $10,000 of income in Column 6 is significant at less than the .0001 level and implies that those in this income level receive sentences roughly six months longer than those in the excluded ($35,000 or more) category. We presume that some of this difference arises because income determines what quality of legal services the defendant retains and perhaps the greater ability to trade fines for prison time. The socio-economic status of the defendant is undoubtedly proxied by income as well. This effect rapidly decreases for our higher income categories to 1.19 months for $10,000 to $20,000 of income and 1.25 months for $20,000 to $35,000.

More important for our purposes is the effect of income controls, even crude ones, on the estimated racial disparities. The inclusion of income in Column 5 reduces the coefficients on the *Black* and *Hispanic* dummy variables by roughly one-third. Thus, income differences may explain up to one-third of the estimated disparity. More accurate measures of income or assets would undoubtedly reduce this further. As noted above, we have reason to believe that income is poorly measured. First, a sizeable portion of the sample (37%) reports little or no income. This is strange, considering that the nature of the crimes reported here (embezzlement, fraud, larceny, tax offenses) almost require higher income levels and a position of responsibility. Second, apart from any oddities of the actual data collected, we know that offenders have incentives to underreport income and assets. Underreporting is a way to avoid paying fines and restitution, and sizeable income and assets may be evidence of an offender's degree of wrongdoing.

D. THE OFFENSE LEVEL CALCULATIONS

Column 6 of Table 3 conditions sentences on base offense level instead of final offense level. As discussed, judges have some discretion over the calculation of the final offense level. It is possible that biases and prejudices could be masked or reflected in its calculation. Thus, conditioning on the final offense level could potentially understate the biases reflected in race and sex disparities. For example, biased judges could be more willing to find that a Hispanic man played an aggravating role than a white woman, which increases the offense level and hence the sentencing range. Adjustments to the base offense level are generally reviewed deferentially because they are highly fact-bound. Previous empirical work indicates that judges exercise a substantial degree of discretion in these areas.[83] Conditioning on this increased offense level could then understate the scope of an unwarranted disparity.

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[83] *Id.*

On the other hand, the base offense level is an incomplete measurement of the severity of the crime. For example, the offense level is enhanced in the case of fraud to account for the size of the loss, whether a banking institution was affected, or whether sophisticated means were used. Thus, some disparities between sentences at the base offense level are justified because they may disappear once various aspects of the different offenders' conduct are accounted for.

Column 6 of Table 3 reveals that, when sentences are conditioned on base offense level, blacks and Hispanics actually receive shorter sentences than whites. In other words, when sentences are compared without accounting for *before* judicial discretion, blacks and Hispanics receive shorter sentences relative to whites. *After* adjustments are made—after judicial discretion is accounted for—blacks and Hispanics receive *longer* sentences relative to whites. This means that when sentences are conditioned on base offense level, our findings regarding race and ethnicity are actually reversed. For blacks, sentences are two months shorter, and for Hispanics, sentences are .87 months shorter. Our findings regarding sex, however, are similar even when sentences are conditioned on base offense level; men continue to receive longer sentences relative to women. In fact, the coefficient on the sex dummy variable doubles in size relative to column 1, rising from under three months to over six months.

Table 4 takes on the offense level calculation directly and the findings are consistent with those of Table 3's column 6. First, blacks and Hispanics have *lower* calculated offense levels—blacks by .90 levels and Hispanics by .61 levels. For most crimes in our sample, this would reduce the minimum Guideline prison sentence by roughly two months. Thus, it is not surprising that conditioning on base offense level versus final offense level in the prison sentence regressions changes the results significantly. Also note that men have higher calculated offense levels and whether or not a fine was paid has no influence on the estimated race and sex disparities.

Table 4

OLS Regressions on Final Offense Level

Variable	1 Full Sample	2 No Fine	3 Fine Payers
Black	-.90***	-.87***	-1.01***
	(.029)	(.029)	(.056)
Hispanic	-.61***	-.65***	-.59***
	(.041)	(.051)	(.096)
Asian	-.42***	-.22***	-.43***
	(.062)	(.073)	(.13)
Other	-.41***	-.41***	-.26
	(.11)	(.11)	(.23)

Table 4 (continued)

OLS Regressions on Final Offense Level

Variable	1 Full Sample	2 No Fine	3 Fine Payers
Citizen	-.20***	.11***	.44***
	(.045)	(.046)	(.084)
Male	.68***	.78***	.65***
	(.027)	(.029)	(.057)
Age	.13***	.10***	.16***
	(.009)	(.009)	(.011)
Age Squared/100	-.11***	-.078***	-.15***
	(.016)	(.012)	(.013)
Restitution/10000	.55***	.53***	.63***
	(.043)	(.0043)	(.014)
Restitution Squared/10000	-.61xe-7***	-.57xe-7***	-.76xe-7***
	(.94e-9)	(.94e-9)	(.26e-9)
No Dependents	-.082*	-.071*	-.013
	(.042)	(.046)	(.079)
One Dependent	-.005	.012	.083
	(.045)	(.049)	(.084)
Two Dependents	-.011	.022	.11
	(.045)	(.048)	(.084)
Three Dependents	-.0075	.064	.14
	(.048)	(.053)	(.089)
High School	.41***	.52***	.45***
	(.027)	(.029)	(.027)
College	.88***	1.11***	.91***
	(.042)	(.047)	(.079)
Advanced	1.16***	1.41***	1.20***
	(.072)	(.072)	(.11)
Trial	3.80***	3.79***	3.45***
	(.052)	(.052)	(.092)
Sample Size	96,522	74,837	22,070

Standard errors in parentheses. Total Prison Sentence in months is the dependent variable. All regressions include dummy variables for sentencing grid position, offense type, judicial term, and district.

*Coefficient statistically significant at the 10% level.

**Coefficient statistically significant at the 5% level.

***Coefficient statistically significant at the 1% level.

What should one make of this? The case of the sex disparity is easy because the sex disparities work against men in both cases: men have higher calculated final offense levels and higher prison sentences

conditional on the final offense level. In the case of racial disparities, however, the interpretation becomes tricky because the racial disparities work in opposite directions: minorities have lower calculated final offense levels but, conditional on the final offense level, higher prison terms. It is possible that whites commit larger and more complicated frauds on average, requiring higher calculated offense levels, and hence conditioning on the base offense level instead of the final offense level omits important independent variables. However, the size of the fraud should be controlled for based on the amount of restitution ordered, which we include as an independent variable. Estimates controlling for total loss due to the fraud, which was a variable collected in some years, while not reported, yielded similar results. Interestingly, the payment of a fine, in the case of final offense levels (see Columns 2 and 3 of Table 4), does not affect the size of the disparity by much. This stands in contrast to the prison sentence results. However, these disparities are now working in favor of non-whites, so the results are not inconsistent.[84]

On balance, we suspect that much of the reversal here is due to omitted variable bias given the inadequacy of the base offense controls, and relevant sentencing factors such as sophistication of a fraud may well be correlated with race. This, however, is only an educated guess. We would suspect similar factors to be at work in the sex disparity, which, contrary to the race results, increased.

E. INCARCERATION AND DOWNWARD DEPARTURES

Mainly for comparison purposes, Tables 5 and 6 perform probits on whether a prison sentence was imposed and whether a downward departure from the Guidelines was made. In Tables 5 and 6, just as in Table 3, large racial disparities are estimated, and racial disparities are greater among those who paid fines.

The prison probit results in Table 5 (Y=1 if there is some prison time imposed, 0 otherwise) parallel the results using total prison sentence in months as the dependent variable. The reported coefficients should be interpreted as the increase in the proportion going to prison based on being black, Hispanic, etc. relative to those who are white. In Column 1, for example, the coefficient on the black dummy is .035, suggesting that 3.5 percentage points more blacks go to prison than observationally equivalent

[84] We acknowledge the possibility that prosecutorial discretion leaves whites with lower level offenses to slip past while minorities do not. This would cause the average adjustment for whites to be larger than the average adjustment for minorities, which could explain the result.

whites. Given that 55% of the sample are not sentenced to any prison time, this represents a slight disparity. As in the case of prison sentences, however, the disparities for fine payers are much larger than disparities among non-payers. For example, for non-payers the black-white disparity is 2.2 percentage points versus 4.7 percentage points for fine payers.

Table 6 performs a probit analysis on downward departures (Y=1 if there is a downward departure, 0 otherwise). The sample is limited in two important ways. First, all substantial assistance departures are removed. Such departures must be requested by the prosecution, and cannot be unilaterally granted by the judge. Second, we exclude all cases in which no prison time was a possibility because it was in the Guideline range or available as an alternative sentence (this excludes cases in the A and B range of the sentencing table).

As in the case of the prison probits, sizeable disparities are estimated, and these disparities are much larger within the group that paid a fine than within the group that did not. In the case of blacks, the disparity for fine payers is nearly twice as large, and in the case of Hispanics it is nearly five times as large.

Table 5

Probit on Prison (Y=1 if Prison imposed, 0 otherwise)

Variable	1 Full Sample	2 No Fine	3 Fine Payers
Guidelines Permit no Prison	-.26***	-.26***	-.21**
	(.018)	(.012)	(.028)
Black	.035***	.022***	.047***
	(.005)	(.024)	(.012)
Hispanic	.064***	.058***	.071***
	(.007)	(.008)	(.017)
Asian	-.018*	-.021*	.003
	(.011)	(.012)	(.019)
Other	-.023	.014	-.012
	(.019)	(.019)	(.041)
Citizen	-.19***	-.20***	-.11***
	(.005)	(.006)	(.015)
Male	.10***	.10***	.091***
	(.004)	(.021)	(.010)
Age	.007***	.007***	.009***
	(.001)	(.001)	(.002)
Age Squared/100	-.012***	-.012***	-.013***
	(.001)	(.0013)	(.0029)

Table 5 (continued)

Probit on Prison (Y=1 if Prison imposed, 0 otherwise)

Variable	1 Full Sample	2 No Fine	3 Fine Payers
No Dependents	.048***	.050***	.023
	(.007)	(.008)	(.014)
One Dependent	.019**	.024***	.004
	(.007)	(.007)	(.015)
Two Dependents	.005	.013	-.023
	(.007)	(.008)	(.015)
Three Dependents	-.0007	-.006	-.019
	(.008)	(.008)	(.016)
High School	-.052***	-.042***	-.033*
	(.005)	(.005)	(.001)
College	-.078***	-.065***	-.059***
	(.007)	(.008)	(.013)
Advanced	-.046***	-.035***	-.023
	(.012)	(.012)	(.017)
Trial	.25***	.21***	.34***
	(.007)	(.048)	(.019)
Sample Size	97,095	74,937	21,971

Standard errors (the numbers in parentheses) are Huber-White robust estimates. Total Prison Sentence in months is the dependent variable. All regressions include dummy variables for sentencing grid position, offense type, judicial term, and district. Coefficients reflect marginal effects.

*Coefficient statistically significant at the 10% level.

**Coefficient statistically significant at the 5% level.

***Coefficient statistically significant at the 1% level.

Table 6

Probit on Downward Departure from Guidelines (Y=1 if downward departure, 0 otherwise)

Variable	1 Full Sample	4 No Fine	5 Fine Payers
Black	-.041***	-.037***	-.071***
	(.004)	(.008)	(.013)
Hispanic	-.022***	-.013*	-.065***
	(.007)	(.007)	(.016)
Asian	-.039***	-.016	-.074***
	(.009)	(.011)	(.021)

Table 6 (continued)

Probit on Downward Departure from Guidelines (Y=1 if downward departure, 0 otherwise)

Variable	1 Full Sample	4 No Fine	5 Fine Payers
Other	-.032*	-.042***	.029
	(.017)	(.017)	(.057)
Citizen	.029***	.031***	-.003
	(.006)	(.006)	(.019)
Male	-.083***	-.077***	-.098***
	(.005)	(.006)	(.018)
Age	-.008***	-.006***	-.016***
	(.001)	(.001)	(.002)
Age Squared/100	.011***	.011***	.022***
	(.001)	(.001)	(.003)
No Dependents	-.041***	-.031***	-.049***
	(.006)	(.007)	(.017)
One Dependent	-.022***	-.019***	-.031**
	(.007)	(.007)	(.017)
Two Dependents	-.005	-.005	-.024
	(.007)	(.007)	(.019)
Three Dependents	-.003	-.013*	.019
	(.008)	(.008)	(.021)
High School	.015**	.012**	.039***
	(.004)	(.0049)	(.013)
College	.038***	.034***	.067**
	(.007)	(.007)	(.018)
Advanced	.029**	.023**	.055**
	(.009)	(.011)	(.022)
Trial	-.064***	-.028***	-.10***
	(.006)	(.0066)	(.011)
Sample Size	41,822	35,237	6,515

Standard errors (the numbers in parentheses) are Huber-White robust estimates. Total Prison Sentence in months is the dependent variable. All regressions include dummy variables for sentencing grid position, offense type, judicial term, and district. Coefficients reflect marginal effects.

*Coefficient statistically significant at the 10% level.

**Coefficient statistically significant at the 5% level.

***Coefficient statistically significant at the 1% level.

F. COMPARISONS TO PAST STUDIES

In many respects our results are consistent with past studies of white-collar crime. Like Mustard, who examined fraud cases under the Guidelines as part of his broad study, and Michael Benson and Esteban Walker, who examined pre-Guidelines white-collar crime cases in a single federal district court, we find that in white-collar cases, when sentences are conditioned on final offense levels, nonwhites were both more likely to be incarcerated and more likely to receive longer sentences than whites.[85] Like Waldfogel, we find evidence suggesting that defendants are able to trade fines for reductions in prison time.

In some respects, however, our results diverge dramatically from the last book in the series of Yale Studies, Weisburd et al.'s *Crimes of the Middle Classes*, which examined federal white-collar crime sentences meted out between 1976 and 1978 (roughly ten years before the Guidelines took effect). When we condition sentences according to final offense levels, we find that blacks and Hispanics are both more likely to be incarcerated and more likely to receive long sentences relative to whites. When we condition sentences according to base offense levels, thereby eliminating the effect of adjustments, we find that the results flip; blacks and Hispanics are less likely to be incarcerated and more likely to receive shorter sentences relative to whites. Both techniques revealed disparities, but opposing ones. In contrast, Weisburd et al.'s pre-Guidelines study found no statistically significant racial disparity (though the estimated race coefficient in their prison sentence regression is 12%, roughly in line with ours). Several possible explanations for these discrepancies between our study and the Yale Studies come to mind.

First, our sample sizes are different. The Yale Studies use a sample of 1,094 cases; because of the mechanization of data collection under the Sentencing Commission, we were able to obtain a sample size of 97,208.[86] Second, some unobserved aspect of the Guidelines might have created a disparity where once there was none. This could have happened any number of ways. To give just one example, the Guidelines might have altered the "paradox of leniency and severity" identified by one of the

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[85] *See* Benson & Walker, *supra* note 58, at 298-99 ("Contrary to Wheeler et al., we find that nonwhites are more likely to be incarcerated than their white counterparts. . . . As with the In/Out decision, race has a significant effect on the length of sentence: Nonwhite defendants received longer sentences than white defendants."); Mustard, *supra* note 42, at 312 ("The differences by race . . . exist across offense types. . . . Blacks and males not only receive longer sentences but also are less likely to receive no prison term when that option is available.").

[86] *See supra* Part IV.A.

earlier Yale Studies, *Sentencing the White Collar Offender: Rhetoric and Reality*.[87] The severity occurs, the study claimed, because judges hold defendants with high social status to a higher moral standard than other defendants, and so punish high-status defendants more when they transgress. The leniency occurs because high social status is usually tied to what the study calls "impeccability," meaning a record free of previous criminality and full of magnanimity, and this record supposedly prompts the judge to be lenient. Together these elements combined to pull judges in two directions. The severity element is at the fore when judges are deciding whether to sentence people to prison, and the leniency element is at the fore when judges are deciding how long a prison term should be.[88] According to the theory, then, high status offenders are imprisoned more than other offenders, but among those who are imprisoned, they have the shorter prison terms.

Perhaps the Guidelines altered the paradox for actual sentences, examined in this study as sentences conditioned on final offense levels, by taking many in/out decisions, meaning decisions of whether or not to impose any prison time, away from judges. The severity effect may be less powerful under the Guidelines because judges have less discretion than before in choosing whether to sentence offenders to prison, yet the leniency effect may be just as strong as it was before the Guidelines were enacted. Given that whites tend to be wealthier and of higher status than blacks and Hispanics, the attenuation of the severity effect may have created the disparity in our results. On the other hand, this theory has at least one major weakness: as a practical matter, judges have retained a great deal of discretion in white-collar cases. After all, a large portion of the criminals in our sample (roughly 42%) fall into "Zone A," the section of the Sentencing Table in which judges have a choice as to whether to imprison an offender. Judges also retain a great deal of discretion in meting out fines because the ranges on the Fine Table are so wide.[89] Still, it may deserve further consideration.

The Yale Studies' hypothesis of the leniency and severity paradox might also shed some light on why conditioning sentences on base offense levels reverses our findings. Perhaps base offense level does not account for the factors that, pre-Guidelines, the Yale Studies found encouraged severity against high status defenders. And perhaps final offense level, which incorporates adjustments for amount of money stolen or leadership

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[87] *See* Wheeler et al., *Sentencing the White-Collar Offender: Rhetoric and Reality*, *supra* note 58, at 645.

[88] *See id.* at 651, 653.

[89] *See supra* Table 2.

roles in the offense, etc., does account for the factors that, Pre-Guidelines, the Yale Studies found encouraged severity. This might explain why sentences conditioned on base offense level differ so dramatically from sentences based on final offense level.

VI. CONCLUSIONS

Despite the Sentencing Guidelines' focus on reducing unwarranted sentencing disparities, unexplained racial and ethnic differentials persist even for non-violent, white-collar crimes. We find, however, that the disparities are highly sensitive to sub-samples and to the specification of the model. When the dependent variable is the total prison sentence conditional on the final offense level, the disparities are roughly three times larger among those offenders who paid a fine. This result is nearly as stark in the prison and downward departure probits. When income is considered, the prison sentence disparities decrease by roughly one-third. In addition, when we condition sentences on base offense levels instead of final offense levels, the estimated racial disparities actually flip signs. Whites, not blacks and Hispanics, are on the losing side of the disparity. The sex disparity, on the other hand, consistently disfavors men.

We conclude that observed racial disparities in prison sentences for white-collar criminals are due in large part to the ability of different groups to pay fines and other factors which are often not controlled for or are poorly controlled for (such as wealth). Paying fines reduces the prison time imposed, and thus it seems that whites receive shorter sentences, in part, because they have a disproportionate ability to pay fines. This does not imply that there are no other sources of racial disparities, however, because disparities remained even within the group that did not pay a fine.

There are a couple of important policy implications to be drawn from the analysis. First, if fines are more heavily relied upon, the analysis suggests that racial disparities in prison sentences, particularly those between black and whites, might increase. Second, if racial disparities in white-collar sentences and fines are driven partly by income levels and unobserved assets, then a more creative system of fining and ascertaining the ability of offenders to pay fines might actually reduce observed racial disparities. If fines are made proportionate to wealth and a system of payment options is created, prison time may be forgiven in a more equitable fashion.

Appendix 1

Sentencing Table (in months of imprisonment)[90]

	Offense Level	Criminal History Category (Criminal History Points) I (0 or 1)	II (2 or 3)	III (4, 5, 6)	IV (7, 8, 9)	V (10, 11, 12)	VI (13 or more)
	1	0-6	0-6	0-6	0-6	0-6	0-6
	2	0-6	0-6	0-6	0-6	0-6	1-7
	3	0-6	0-6	0-6	0-6	2-8	3-9
Zone A	4	0-6	0-6	0-6	2-8	4-10	6-12
	5	0-6	0-6	1-7	4-10	6-12	9-15
	6	0-6	1-7	2-8	6-12	9-15	12-18
	7	0-6	2-8	4-10	8-14	12-18	15-21
	8	0-6	4-10	6-12	10-16	15-21	18-24
Zone B	9	4-10	6-12	8-14	12-18	18-24	21-27
	10	6-12	8-14	10-16	15-21	21-27	24-30
Zone C	11	8-14	10-16	12-18	18-24	24-30	27-33
	12	10-16	12-18	15-21	21-27	27-33	30-37
	13	12-18	15-21	18-24	24-30	30-37	33-41
	14	15-21	18-24	21-27	27-33	33-41	37-46
	15	18-24	21-27	24-30	30-37	37-46	41-51
	16	21-27	24-30	27-33	33-41	41-51	46-57
	17	24-30	27-33	30-37	37-46	46-57	51-63
	18	27-33	30-37	33-41	41-51	51-63	57-71
	19	30-37	33-41	37-46	46-57	57-71	63-78
	20	33-41	37-46	41-51	51-63	63-78	70-87
	21	37-46	41-51	46-57	57-71	70-87	77-96
	22	41-51	46-57	51-63	63-78	77-96	84-105
	23	46-57	51-63	57-71	70-87	84-105	92-115
	24	51-63	57-71	63-78	77-96	92-115	100-125
	25	57-71	63-78	70-87	84-105	100-125	110-137
	26	63-78	70-87	78-97	92-115	110-137	120-150
	27	70-87	78-97	87-108	100-125	120-150	130-162
Zone D	28	78-97	87-108	97-121	110-137	130-162	140-175
	29	87-108	97-121	108-135	121-151	140-175	151-188
	30	97-121	108-135	121-151	135-168	151-188	168-210
	31	108-135	121-151	135-168	151-188	168-210	188-235
	32	121-151	135-168	151-188	168-210	188-235	210-262
	33	135-168	151-188	168-210	188-235	210-262	235-293
	34	151-188	168-210	188-235	210-262	235-293	262-327
	35	168-210	188-235	210-262	235-293	262-327	292-365
	36	188-235	210-262	235-293	262-327	292-365	324-405
	37	210-262	235-293	262-327	292-365	324-405	360-life
	38	235-293	262-327	292-365	324-405	360-life	360-life
	39	262-327	292-365	324-405	360-life	360-life	360-life
	40	292-365	324-405	360-life	360-life	360-life	360-life
	41	324-405	360-life	360-life	360-life	360-life	360-life
	42	360-life	360-life	360-life	360-life	360-life	360-life
	43	Life	Life	Life	Life	Life	Life

[90] The "zones" mark areas of the Table in which judges have the same amount of discretion.