Demographic Differences in Sentencing

INTRODUCTION

In 2010, the Commission published the results of an analysis of federal sentencing data, the 2010 *Booker* Multivariate Analysis,[1] which examined whether differences in the length of the sentence imposed on offenders correlated with differences in demographic characteristics of those offenders. The analysis focused on three time periods: the PROTECT Act period, the *Booker* period, and the *Gall* period, which included data current through the end of fiscal year 2009.[2] The 2010 *Booker* Multivariate Analysis determined that demographic factors were associated with sentence length to a statistically significant extent during some of the time periods under study. Among other findings, the analysis showed that Black male offenders received longer sentences than similarly situated White male offenders, and that the gap between sentence lengths for Black and White male offenders increased from the PROTECT Act period through the *Gall* period.

In its 2010 report, the Commission also noted that results from the analysis must be taken with caution. Multivariate regression analysis is a tool commonly used by social scientists, as well as in a variety of legal contexts, to examine the relationship between multiple factors, [3] and it has its limitations. For example, one or more key factors which could affect the analysis may have been omitted from the methodologies used because a particular factor is unknown, or because data about it is not readily available in the Commission's datasets. For example, judges may consider potentially relevant factors available to them in a presentence report, such as an offender's violent criminal conduct or long employment history. However, the Commission does not routinely extract that information from the sentencing documents it receives. Such factors, therefore, are not included in the Commission's datafile, and therefore are not controlled for in this analysis.

Moreover, while the Commission's analysis demonstrated that some differences in sentences imposed on certain groups of offenders were associated with specific demographic characteristics, the Commission noted that these differences may have been attributable to one or more of a number of factors that, while correlated with the demographic characteristics, are not caused by them. For example, judges make decisions when sentencing offenders based on many legitimate considerations that are not or cannot be measured. Because multivariate regression analysis cannot control for all relevant factors, the results should be interpreted with caution and should not be taken to suggest race or gender discrimination on the part of judges. Multivariate analysis cannot explain why the observed differences in sentencing outcomes exist, but can only show that they exist. The analysis also measures the relative size of those differences and determines the time periods in which they were observed.

In September 2011, the Commission updated its analysis by adding 2010 data to the *Gall* period, and by including additional *Koon* period data that previously had not been part of the analysis.[4] That

[1] *See* U.S. SENTENCING COMM'N, DEMOGRAPHIC DIFFERENCES IN FEDERAL SENTENCING PRACTICES: AN UPDATE OF THE BOOKER REPORT'S MULTIVARIATE REGRESSION ANALYSIS (2010) [hereinafter 2010 *Booker* Multivariate Analysis].

[2] The PROTECT Act period was from May 1, 2003, the date of the enactment of the PROTECT Act, through June, 24, 2004, the date of the Supreme Court's decision in *Blakely v. Washington*; the *Booker* period was from January 12, 2005, the date of the Supreme Court's decision in *United States v. Booker*, through December 10, 2007, the date of the Supreme Court's decisions in *Kimbrough v. United States* and *Gall v. United States*; and the *Gall* period was from December 11, 2007 through September 30, 2009. *See id*. at A-1.

[3] *See* Michael O. Finkelstein and Bruce Levin, *Statistics for Lawyers* 350 (2d ed. 2001) [hereinafter Finkelstein].

[4] For the purposes of the multivariate analysis, the *Koon* period runs from October 1, 1998 through April 30, 2003.

analysis was included in the 2011 testimony of Commission Chair Patti Saris before the House Subcommittee on Crime, Terrorism, and Homeland Security.[5] For this report, the Commission updated the analysis presented in the Chair's congressional testimony by adding 2011 data to the *Gall* period. In addition, the Commission reviewed public comment following release of its earlier analysis, including concerns that different statistical methodologies would result in different outcomes with respect to demographic differences in sentencing. The Commission performed additional analyses to address these concerns, and the results are presented in this chapter. The Commission also expanded its analysis to examine sentences relative to the guideline range; specific offense types, including drug trafficking, fraud, and firearms; and changes in sentence length for offenders of particular race and gender pairings.

SUMMARY OF FINDINGS FROM THE COMMISSION'S MULTIVARIATE ANALYSIS

Consistent with previous results the Commission found that sentence length is associated with some demographic factors. Sentences of similarly situated Black male offenders were 19.5 percent longer than those of similarly situated White male offenders during the *Gall* period. The gap between sentence length for Black male offenders and White male offenders was statistically significant during all four periods, but was smallest during the PROTECT Act period (5.5%) and largest during the *Gall* period (19.5%). With respect to race as a specific demographic factor, alternative models replicated the Commission's results, showing the same pattern of an increasing gap in sentence length between White and Black male offenders.

Additional Commission analyses regarding specific offense types and sentence relative to the guideline range may help specify which factors may or may not contribute to the demographic differences noted above. With respect to the sentence relative to the guideline range, the Commission conducted additional multivariate analyses of within range, government sponsored below range, and non-government sponsored below range sentences. The analysis showed that there were statistically significant differences in sentence length during all four periods between Black and White male offenders sentenced within the range.

With respect to offenders who received substantial assistance below range sentences, Black male offenders received longer sentences than White male offenders during the *Koon* period only. Other Race male offenders who received substantial assistance below range sentences received longer sentences than White male offenders during the *Booker* period only.

Comparing Black male offenders to White male offenders who received a non-government sponsored below range sentence (the analysis did not include the *Koon* period), the differences in sentence length between the two groups were statistically significant only in the *Booker* period, when Black male offenders who received a non-government sponsored below range sentence received sentences 12.3 percent longer than White male offenders who received a non-government sponsored below range sentence. Differences in sentence length between Hispanic male offenders and White male offenders who received a non-government sponsored below range sentence were statistically significant in the *Gall* period. There were no statistically significant differences between the sentences imposed on Other Race male offenders and White male offenders who received a non-government sponsored below range sentence. White and Black female offenders who received a non-government sponsored below range sentence received shorter sentences than White male offenders who received a non-government sponsored below range sentence during the *Gall* period. Hispanic and Other Race female offenders who received a non-government sponsored below range sentence received shorter sentences than White male offenders who received a non-government sponsored below range sentence during both the *Booker* and *Gall* periods.

Multivariate analysis of the odds of receiving a non-government sponsored below range sentence revealed a statistically significant difference during the PROTECT Act, *Booker*, and *Gall* periods (the analysis

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This is a different definition of the *Koon* time period than used elsewhere in this report. *See* Part C – Methodology.

[5] *See* Prepared Testimony of Judge Patti B. Saris, Chair, United States Sentencing Commission, before the Subcommittee on Crime, Terrorism, and Homeland Security Committee on the Judiciary, United States House of Representatives (Oct. 12, 2011), *available at* http://www.ussc.gov/Legislative_and_Public_Affairs/Congressional_Testimony_and_Reports/Testimony/20111012_Saris_Testimony.pdf.

did not include the *Koon* period). During these periods, Black male offenders were more than 20 percent less likely to receive a non-government sponsored below range sentence than White male offenders were. These differences may contribute to the difference in sentence length between Black and White male offenders. Hispanic male offenders were less likely than White male offenders to receive a non-government sponsored below range sentence during all three periods, and this difference was highest (31.6%) during the *Gall* period.

Results of the multivariate analysis of specific offense types varied depending on the offense. For example, an analysis of fraud cases showed that during three out of four periods, there was no statistically significant difference between sentence length of White male and Black male offenders. The only statistically significant difference was seen in the *Koon* period. In contrast, analysis of firearms cases revealed statistically significant differences between sentence length of White and Black male offenders during the *Koon*, *Booker*, and *Gall* periods. There was no statistically significant difference during the PROTECT Act period.

In the multivariate analyses of all cases, female offenders of all races received shorter sentences than White male offenders during all four periods. In every other analysis, including an analysis of offenders sentenced within the guideline range, offenders sentenced below the guideline range pursuant to a substantial assistance departure or other government sponsored departure, and offenders receiving non-government sponsored below range sentences, female offenders of some racial groups received shorter sentences than White male offenders during some of the periods studied. White and Hispanic female offenders were more likely than White male offenders to receive a non-government sponsored below range sentence during some of the periods studied. In drug trafficking, fraud, and firearms cases, female offenders of some racial groups received shorter sentences than White male offenders during some of the periods studied.

Non-citizen offenders received longer sentences than United States citizens during three out of the four periods studied. The difference was not present during the PROTECT Act period, but returned during the *Booker* and *Gall* periods at levels exceeding those of the *Koon* period. Offenders with at least some college education received shorter sentences than offenders with no college education during all of the periods studied.

Finally, the Commission performed a multivariate analysis to determine whether sentence length has changed across periods for each race/gender pairing, and if so, in what direction. For some race/gender pairings, sentences were shorter during the *Gall* period than they were in previous periods. Sentences for White male and female offenders and Black male and female offenders were shorter during the *Gall* period than during the *Booker* period. Although White and Black offenders received shorter sentences in the *Gall* period compared to the *Booker* period, decreases in sentence length were larger for White male and female offenders than for Black male and female offenders. Sentence length for Hispanic and Other Race male offenders also decreased in the *Gall* period compared to the *Booker* period. Sentence length for Hispanic and Other Race female offenders did not change to a statistically significant extent.

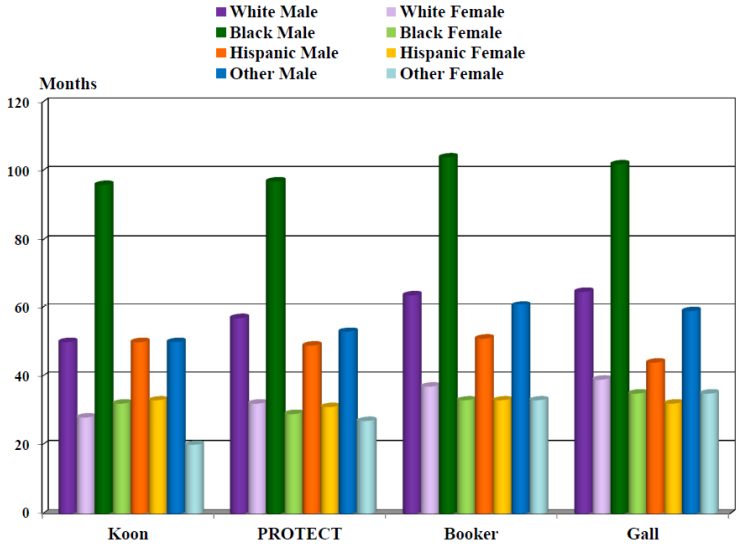
THE NEED FOR MULTIVARIATE REGRESSION ANALYSIS OF DEMOGRAPHIC DIFFERENCES IN SENTENCING PRACTICES

With respect to demographic differences in sentencing outcomes, results from a simplistic pairing of demographic factors and sentencing outcomes can be misleading. Such an analysis may yield results that accurately describe sentencing outcomes, but differences that may seem to correlate with demographic factors may actually be attributable to non-demographic factors, such as the offense of conviction or whether the offender was subject to a statutory mandatory minimum penalty. For example, a simplistic pairing of race and gender with sentence length shows that sentences of Black male offenders were twice as long as those of White male offenders. Such a simplistic analysis compares Black male offenders to White male offenders without accounting for any differences in seriousness of offense, guideline minimum, or any other non-demographic factor.

Nonetheless, commentators have used publicly available data to draw certain conclusions about trends in federal sentencing and the contribution of various factors to those trends. For example, at its February 2012 hearing on post-*Booker* federal sentencing, the Commission received public comment stating that the gap between sentences for Black and White offenders has narrowed as a result of judges' increased

discretion in an advisory guideline regime.[6] While the statement that the gap between sentence length for Black and White offenders is narrowing is true, attributing the change to increased judicial discretion is a conclusion that cannot be drawn from an analysis that fails to control for relevant factors. For instance, the narrowing gap between Black and White offender sentence length is due in part to reductions in penalties for crack cocaine offenses in which Black offenders constitute the large majority of offenders. Figures E-1 and E-2 below both show that average guideline minimum and average sentences for Black male offenders were shorter during the *Gall* period than during the *Booker* period. At the same time, average guideline minimum for White male offenders increased during each period. The average sentence for White male offenders increased during the *Koon*, PROTECT Act, and *Booker* periods, but decreased during the *Gall* period.

Figure E-1
Average Guideline Minimum by Race/Gender Pairing
***Koon* Period through *Gall* Period**



SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

The Commission's multivariate analysis determined that, when legally relevant factors are controlled for, the gap in sentence length between Black male and White male offenders *increased* during the *Gall* period compared to the *Booker* period. Furthermore, with respect to the role of judicial discretion in determining sentence length, the Commission's study concluded that when judges have the discretion to impose a non-government sponsored below range sentence, Black offenders were less likely to receive such a reduction than White offenders during the three periods studied (PROTECT Act, *Booker*, and *Gall*). These results should be taken with caution however, because a multivariate analysis has limitations, such as omitting one or more key factors because a factor is unknown or because data about it is not readily available in the Commission's datasets. Furthermore, judges make sentencing decisions based on many legitimate considerations that are not or cannot be measured.

To further illustrate the differences between a simplistic analysis and a multivariate analysis, the Commission conducted a simplistic analysis comparing sentencing outcomes among eight race/gender pairings – White males/females, Black males/females, Hispanic males/females, and Other Race males/females – during the four periods discussed throughout the sentencing data chapters. This section presents some results from this analysis in summary form.[8]

As seen in Figures E-1 and E-2, a simplistic analysis that does not account for relevant factors, such as offense type, suggests that race and gender are correlated with sentence length. The simplistic analysis shows that Black male offenders received sentences that were roughly 40 months longer than the sentences White male offenders received. Female offenders of all races received sentences that were approximately half the length of sentences received by their male counterparts in the same racial group.

Figure E-1 depicts the average guideline minimum during the four periods for each race/gender pairing. Although the average guideline minimums

[6] *U.S. Sent'g Comm'n Public Hearing on Federal Sentencing Options After* Booker, Washington, DC (Feb. 16, 2012) (Statement of Raymond Moore, Federal Public Defender, Districts of Colorado and Wyoming, written statement at 18); *U.S. Sent'g Comm'n Public Hearing on Federal Sentencing Options After* Booker, Washington, D.C. (Feb. 16, 2012) (Statement of Lisa Wayne, President, National Association of Criminal Defense Lawyers, written statement at 10). It is not clear what methodology the commentators used to reach these conclusion, and the Commission did not attempt to replicate it.

[8] Additional figures depicting the results of the simplistic analyses discussed in this paragraph and the following paragraph are in the Appendix.

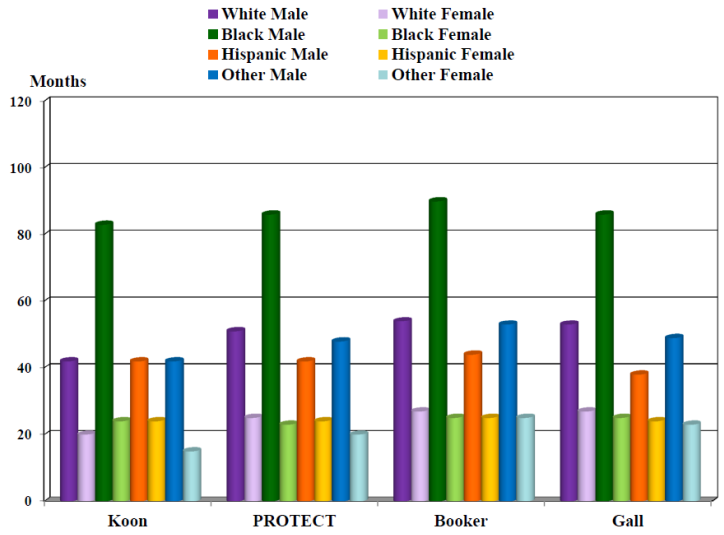
fluctuated for some race/gender pairings over the time periods, Black male offenders consistently faced the highest guideline minimums. Of all male offenders in the analysis, Hispanic male offenders faced the lowest guideline minimums, except during the *Koon* period, when the guideline minimums for Hispanic male offenders were equal to those of Other Race male offenders. Female offenders of all races consistently faced shorter guideline minimums than their male counterparts of the same race.

Figure E-2 depicts the average sentence of confinement for each race/gender pairing during the four periods[9]. Black male offenders received the longest average sentence of confinement during each period: the average sentence of confinement for Black male offenders was 83 months during the *Koon* period, 90 months during the *Booker* period, and 86 months in the *Gall* period. In comparison, the average sentence of confinement for White male offenders was 42 months during the *Koon* period, 54 months during the *Booker* period, and 53 months during the *Gall* period. The average sentence of confinement for female offenders was consistently lower than the average sentence of confinement for male offenders of the same race.

In non-government sponsored below range sentences, the simplistic analysis indicated that White offenders and Other Race male offenders consistently received greater reductions below the guideline minimum than Black or Hispanic male offenders. Female offenders received greater reductions than their male counterparts of the same race.

The simplistic analysis suggested a correlation between demographic factors and sentencing outcomes. However because a simplistic analysis does not control for other relevant factors, such as offense type, it compares offenders who may have nothing in common. For example, in the simplistic analysis, a Black male offender facing a guideline minimum of 46 months will often receive a higher sentence than a White male offender facing a guideline minimum of 21 months. The difference in sentencing outcomes may be attributable in great part to the guideline minimum, which is determined by the type of offense and the criminal history category of the offender, and not attributable to the race of the offender. For this reason, conclusions about whether and to what extent demographic factors actually contribute to the outcomes observed cannot be made from this simplistic analysis alone, and multiple regression analysis is necessary to explore the factors that may contribute to these outcomes.

Figure E-2
Average Confinement Sentence by Race/Gender Pairing
***Koon* Period through *Gall* Period**



SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

MULTIVARIATE ANALYSIS OF DEMOGRAPHIC DIFFERENCES IN SENTENCING

For this report, the Commission conducted a series of multivariate regression analyses to further explore the apparent relationship between demographic factors such as race and gender and sentencing outcomes. The multivariate analyses were aimed at determining whether demographic differences in sentencing outcomes were statistically significant, and whether those findings changed during the *Koon*, PROTECT Act, *Booker*, and *Gall* periods.

Multivariate regression analysis usually begins with a decision to examine an observed phenomenon or outcome. In this instance, the outcome observed is the difference in sentence length between offenders. The researcher will then develop a hypothesis as to the many possible factors that might produce that outcome. In this instance, such relevant factors as type

[9] The average sentence of confinement includes prison sentences and alternatives to imprisonment. Probationary sentences are averaged in with a value of zero months.

of offense, guideline minimum, and whether the offender was subject to a mandatory minimum penalty may contribute to differences in sentence length. The hypothesis is then tested through the use of multivariate regression analysis as data about the outcome and many possible factors affecting that outcome are brought together. The goal of multivariate regression analysis is to determine whether there is an association between the factors being studied, and if so, to measure the extent to which each factor contributes to the observed outcome. Researchers refer to the outcome (in this instance, sentence length) as the "dependent variable." The factors that might affect (and therefore might explain) that outcome are referred to as the "independent variables" or the "explanatory variables."[10]

Multivariate regression analysis often does not control for all relevant factors because sufficient data is not always readily available. For example, some factors that may be relevant to sentencing outcomes include whether the offender's history included violent criminal conduct, the offender's family ties, and the offender's employment history.[11] Data is not readily available for those factors because the Commission does not routinely extract that information from the documents it receives. Therefore the analysis cannot control for them.[12] For this reason, caution should be exercised in drawing conclusions based on multivariate regression analysis.

The principal benefit of multivariate regression analysis is that it controls for the effect of each factor in the analysis by comparing offenders who are similar to one another in relevant ways. For example, controlling for the presumptive sentence (guideline minimum) and offense type means that Black male offenders convicted of firearms offenses and who faced a guideline minimum of 46 months of imprisonment are compared to White male offenders convicted of firearms offenses who faced a guideline minimum of 46 months of imprisonment. By controlling for such factors and comparing similarly situated offenders to each other, multivariate regression analysis seeks to answer the question: if two offenders are similar in certain ways, what other factors might be associated with those two offenders receiving different sentences? In addition, multivariate regression analysis measures the extent of the difference in outcomes.

The Commission's findings are set forth below in six parts. The first part describes the methodology used to conduct the various multivariate regression analyses. The second part provides a summary of findings for the analyses. The third part sets forth the results of its multivariate analysis for all cases updated to include fiscal year 2011 data. The fourth part presents the findings of new multivariate

[10] For a more detailed explanation of multivariate regression analysis, the methodology behind it, and its uses and limitations, *see* 2010 *Booker* Multivariate Analysis, *supra* note 1, at 4-10. *See also* Federal Judicial Center, *Reference Manual on Scientific Evidence* 143, 181-83 (2d ed. 2000) [hereinafter *FJC Reference Manual*] (chapters titled "Reference Guide on Statistics," by David H. Kaye, M.A., J.D., and David A. Freedman, Ph.D., and "Reference Guide on Multiple Regression," by Daniel L. Rubinfeld, Ph.D.); Neil J. Salkind, *Statistics for People Who (Think They) Hate Statistics* 324 (2d ed. 2007).

[11] *See generally* United States Sentencing Commission, United States Sentencing Commission Guidelines Manual (2012) [hereinafter USSG] at Chapter 4. As noted in the *2006* Booker *Report*, "The presence of violent criminal history may lead the court to sentence higher in the prescribed range. The Commission's datafile does not have information on the type of criminal history behavior. In 2002, the Commission created a datafile which took a 25 percent random sample of cases sentenced in Fiscal Year 2000. This datafile looked more closely at [an] offender's criminal conduct, including detailed information on the type of criminal history the offender had. Using this data (the Intensive Study Sample 2000, or ISS2000), it was found that 24.4 percent of white offenders had violent criminal history events, as did 43.7 percent of black offenders, 18.9 percent of Hispanic offenders, and 23.7 percent of 'other' offenders." *2006* Booker *Report*, *supra note* 14, Part A, at 105 n.317.

[12] In addition, the Commission also does not have ready access to data related to prosecutorial decision making, which some commentators contend may contribute to demographic differences in sentencing. For further discussion of demographic differences in prosecutorial decision making, *see* VERA Institute of Justice, Do Race and Ethnicity Matter in Prosecution?: A Review of Empirical Studies, available at http://www.vera.org/download?file=3532/race-and-ethnicity-in-prosecution-first-edition.pdf June 2012 (reviewing 34 studies analyzing the role of race and ethnicity in prosecutorial decision making).

and logistic regression[13] analyses addressing sentences relative to the guideline range. The fifth part presents the findings of a new multivariate analysis addressing three specific offense types: drug trafficking, fraud, and firearms. The sixth part presents the findings of a new multivariate analysis addressing changes in sentence length by race/gender pairing during the four time periods.

METHODOLOGY

The dependent variable used in each of the analyses was an offender's total sentence length, in months, which included alternatives to imprisonment.[14] Probationary sentences without conditions of confinement are included as sentences of zero months. The independent variables were:

- The presumptive sentence, which is the bottom of the applicable sentencing guideline range that applies in a case (*i.e.*, the minimum sentence, in months, to which the offender was subject under the sentencing guidelines, taking into account all guideline, statutory, and mandatory minimum provisions);[15]
- Type of offense committed (violent, sexual, pornography, drug trafficking, white collar, immigration, or other);[16]
- Whether a statutory mandatory minimum punishment was applied at sentencing;[17]
- Whether the court determined that a sentence outside the applicable sentencing guideline range was warranted;[18]
- Detention status (whether the offender had been released on bail prior to sentencing);
- Whether the offender pleaded guilty;
- Race of the offender paired with the gender of the offender;
- Citizenship of the offender (whether the offender was a United States citizen);
- Educational level of the offender; and

[13] In this instance, an analysis of the odds of receiving a non-government sponsored below range sentence. *See infra* note 33 [defining odds ratio analysis].

[14] Some have suggested that a period of alternative confinement should not be included in the offender's total sentence length. This analysis includes periods of alternative confinement (home detention or community confinement) because the main independent variable is the presumptive sentence. In zones A, B, and C of the Sentencing Table (USSG §5A), the presumptive sentence can be satisfied by a period of alternative confinement. The inclusion of alternative sentences reduces the likelihood of introducing error in the statistical analysis due to the relationship of the presumptive sentence and overall confinement.

[15] In some cases, a mandatory minimum provision limits the guideline range. For example, in a drug trafficking case in which a ten year mandatory minimum applies, the guideline minimum cannot be less than 120 months unless the offender qualifies for relief from the mandatory minimum. *See* USSG §5G1.1(b) ("Where a statutorily required minimum sentence is greater than the maximum of the applicable guideline range, the statutorily required minimum sentence shall be the guideline sentence."). For more information on how the guidelines incorporate mandatory minimum penalty provisions, see Chapter 3 of the Commission's Report to Congress: Mandatory Minimum Penalties in the Federal Criminal Justice System, October 2011.

[16] The offense types (or categories) used in this analysis are broad in order to ensure a sufficient number of cases. The seriousness of the several crimes varies within the offense type categories as does the demographic characteristics of the offenders convicted of those crimes. Certain crimes within an offense type are punished more severely than others (*e.g.*, those crimes involving injury not accounted for under the sentencing guidelines) and offenders of a particular demographic group may be disproportionately convicted of those crimes. If so, the offense type variables used in this analysis may not fully account for the effect on the sentence length imposed that is attributable to certain crimes.

[17] This variable refers to whether the offender remained subject to a mandatory minimum penalty at sentencing, or whether the offender obtained relief from the mandatory minimum penalty and therefore was not subject to a mandatory minimum penalty at sentencing (or was never subject to a mandatory minimum penalty because no such penalty applied to the charged offense).

[18] This variable refers to whether the court imposed a sentence above or below the guideline range.

- Age of the offender.

The multivariate analyses pair race and gender into eight distinct groups: White males/females, Black males/females, Hispanic males/females, and Other Race males/females. Reporting the results of the analyses in this way identifies any differences in sentencing outcomes associated with the offender's race, gender, or both. These analyses show that some differences exist, and describe the relative size of those differences, in the periods in which the differences were observed. However, the fact that certain sentencing outcomes may be correlated with demographic factors does not mean that the demographic factors caused the outcome.[19] Therefore, the demographic differences in sentencing outcomes revealed by these analyses should not be interpreted as a finding that demographic factors caused those differences. Neither can the analyses presented in this report be used to explain why the observed differences in sentencing outcomes exist.

Although multivariate regression analysis is common in social science research, and steps were taken to ensure its appropriateness for these analyses, this type of analysis has limitations. One or more key factors that could affect the analysis may have been omitted from the methodologies used because a particular factor is unknown, or because data concerning the factor is not readily available in the Commission's datasets. Such factors may include whether the offender committed violent criminal acts in the past, whether the offender committed crimes not reflected in an offender's criminal history score, and the offender's employment record. Accordingly, the results presented in this report should be interpreted with caution and should not be taken to suggest race or gender discrimination on the part of judges.

SUMMARY OF MULTIVARIATE REGRESSION ANALYSIS FINDINGS

Based on the multivariate analyses set forth below the data reflected that:

- Black male offenders received longer sentences than White male offenders during all four periods studied. The differences in sentence length have increased since *Booker*.

- Female offenders of all races received shorter sentences than White male offenders during all four periods studied. The differences in sentence length fluctuated in the time periods studied for White females, Black females, Hispanic females, and Other Race female offenders.

- Non-citizen offenders received longer sentences than offenders who were United States citizens in three of the four periods (*Koon*, *Booker*, and *Gall*).

- Offenders with some college education received shorter sentences than offenders with

[19] Correlation and causation are different concepts. A variable that is correlated with another may not be caused by it.

> [I]n interpreting the results of a multiple regression analysis, it is important to distinguish between correlation and causality. Two variables are correlated when the events associated with the variables occur more frequently together than one would expect by chance . . . . A correlation between two variables does not imply that one event causes the second. Therefore, in making causal inferences, it is important to avoid spurious correlation. Spurious correlation arises when two variables are closely related but bear no causal relationship because both are caused by a third, unexamined variable . . . . Causality cannot be inferred by data analysis alone; rather, one must infer that a causal relationship exists on the basis of an underlying causal theory that explains the relationship between the two variables. Even when an appropriate theory has been identified, causality can never be inferred directly. One must look for empirical evidence that there is a causal relationship. Conversely, the fact that two variables are correlated does not guarantee the existence of a relationship; it could be that the model – a characterization of the underlying theory – does not reflect the correct interplay among the explanatory variables.

FJC Reference Manual, *supra* note 10, at 183-85. Judges make decisions when sentencing offenders based on many legitimate considerations that are not or cannot be measured. Some of these factors could be correlated with one or more of the demographic characteristics of offenders but not be influenced by any consideration of those characteristics.

no college education during all four periods studied. These differences have remained relatively stable across the time periods studied.

- Offenders over the age of 25 received longer sentences than offenders who were 25 or younger at the time of sentence during three out of the four periods studied (*Koon*, *Booker*, and *Gall*).

RESULTS OF DEMOGRAPHIC MULTIVARIATE REGRESSION ANALYSIS FOR ALL CASES

The Commission's multivariate regression analysis for all cases, updated for fiscal year 2011, continues to demonstrate that some demographic factors are associated with sentence length to a statistically significant extent during the periods studied.

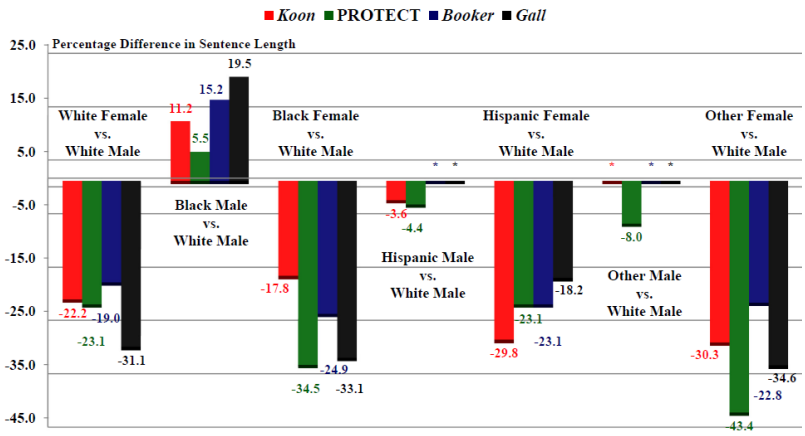
Analysis: All Cases

Figure E-3 depicts differences in sentence length for all cases. Differences in sentence length for Black male offenders compared to White male offenders have increased over time. In the *Koon* period, Black male offenders received sentences that were 11.2 percent longer than those of White male offenders. In the PROTECT Act period, Black male offenders received sentences that were 5.5 percent longer than those of White male offenders. The sentences of Black male offenders were 15.2 percent longer in the *Booker* period, and 19.5 percent longer in the *Gall* period, than the sentences of White male offenders.

The differences between the sentences of Hispanic male offenders and the sentences of White male offenders were statistically significant in two of the four time periods studied. In the *Koon* period, Hispanic male offenders received sentences that were 3.6 percent shorter than sentences imposed on White male offenders, and in the PROTECT Act period, Hispanic male offenders received sentences that were 4.4 percent shorter than sentences for White male offenders. There were no statistically significant differences between the sentences for the two groups during the *Booker* and *Gall* periods.

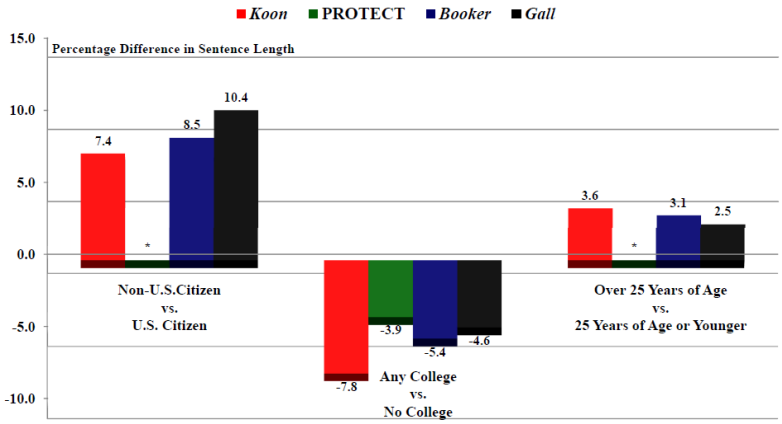
The sentences imposed on Other Race male offenders differed from those imposed on White male offenders to a statistically significant extent only in the PROTECT Act period, when Other Race male offenders received sentences 8.0 percent shorter than those of White male offenders. Differences in sentence length between Other Race male offenders and White male offenders were not statistically significant during the *Koon*, *Booker*, and *Gall* periods. Female offenders, regardless of their race, received sentences that were shorter than sentences for White male offenders in each of the four periods. White female offenders received sentences that were 22.2 percent shorter than those of White males in the *Koon* period, 23.1 percent shorter in the PROTECT Act period, 19.0 percent shorter in the *Booker* period, and 31.1 percent shorter during the *Gall* period. Black female offenders and Other Race female offenders also received shorter sentences than White male offenders during all four periods. For both Black and Other Race female offenders, the differences between their sentences and those of White male offenders were greatest during the PROTECT Act period. Hispanic female offenders received sentences that were shorter than those of White male offenders during all four periods, however the differences were greatest during the *Koon* period (29.8% during the Koon period, 23.1% during the PROTECT and *Booker* periods, and 18.2% in the *Gall* period).

Figure E-3
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
All Cases
***Koon* Period through *Gall* Period**



•Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

Figure E-4
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
All Cases
***Koon* Period through *Gall* Period**



•Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

Figure E-4 depicts the findings of the multivariate analysis regarding demographic differences in sentencing as to citizenship, education, and age for all cases. Non-citizen offenders received longer sentences than United States citizens during three of the four time periods. During the *Koon* period, non-citizens received sentences that were 7.4 percent longer than those of citizens. The differences increased in the *Booker* period to 8.5 percent longer than sentences of United States citizens, and during the *Gall* period to 10.4 percent longer than those of United States citizens. However, there were no statistically significant differences in sentence length between these two groups during the PROTECT Act period.

The differences in sentences for offenders with at least some college education compared to offenders with no college education were statistically significant in all time periods. In the *Koon* period, offenders with at least some college education received sentences that were 7.8 percent shorter than those of offenders with no college education. In the PROTECT Act period, the differences in sentence length decreased to 3.9 percent. During the *Booker* and *Gall* periods, offenders with at least some college education received sentences that were 5.4 and 4.6 percent shorter, respectively, than those of offenders with no college education.

Finally, the differences between sentences of offenders over the age of 25 compared with those 25 years of age or younger were significant in three out of four periods. During the *Koon* period, offenders over the age of 25 received sentences that were 3.6 percent longer than those imposed on offenders who were 25 years of age or younger. The differences between the sentences for these two groups were 3.1 percent in the *Booker* period and 2.5 percent in the *Gall* period. There were no statistically significant differences in sentence length between offenders over the age of 25 and offenders who were 25 years of age or younger during the PROTECT Act period.

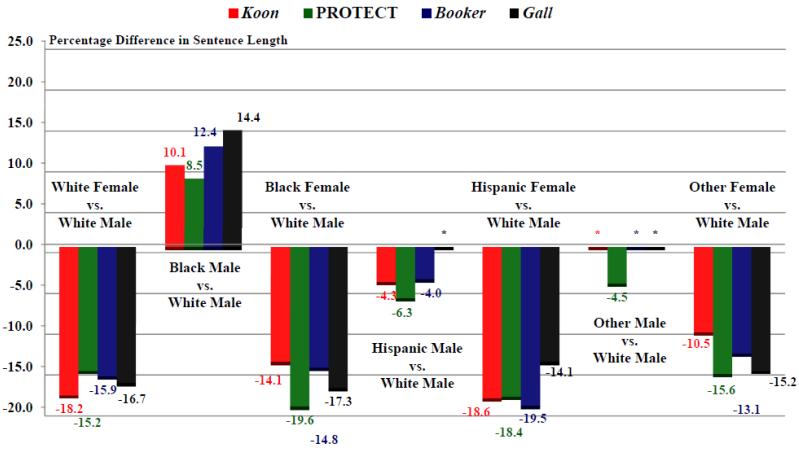
Alternative Analysis: Probationary Sentences Excluded

After the release of the Commission's 2010 report on demographic differences in federal sentencing practices, the Commission received public comment positing that the results of the multivariate analysis would have been different if probationary sentences had been excluded from the population. These commentators expressed the view that the court's "in/out decision" (*i.e.*, whether to sentence an offender to a term of imprisonment as opposed to probation) was a key factor in explaining the findings of demographic differences in sentencing length.[20] In the view of researchers at Pennsylvania State University and others, the sentencing process involves two steps; first the court decides whether to sentence the offender to prison ("in") or probation ("out"), then, in the case of an "in" decision, the court decides how long the term of incarceration should be[21].

[20] *See* Jeffrey T. Ulmer, Michael T. Light & John H. Kramer, *Racial Disparity in the Wake of the Booker/Fanfan Decision: An Alternative Analysis to the USSC's 2010 Report*, 10 Criminology & Pub. Pol'y, 1077 (2011) [hereinafter, the Penn State study]. *See also*, *e.g.*, *U.S. Sent'g Comm'n Public Hearing on Federal Sentencing Options After* Booker, Washington, DC (Feb. 16, 2012) (Statement of Marc Mauer, Executive Director of The Sentencing Project, written statement at 2).

[21] For example, the Penn State Study found that there was a statistically significant difference in the "in/out" decision for Black males as compared to White males in three of the four time periods. This difference increased from Black males having a 10.1% greater likelihood of incarceration than White males in the Pre-PROTECT Act period to a 20.9%

Figure E-5
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
Zero Confinement Excluded
***Koon* Period through *Gall* Period**



•Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

The Penn State study "view[ed] offenders' sentence lengths as conditional on whether they were sentenced to prison." In other words, because the focus of the Penn State study was whether there were demographic differences in sentence length, the researchers considered any offender who received a sentence of probation to have been ineligible to receive a sentence length. By excluding any offender sentenced to probation, the researchers elected to include in the analysis only those offenders "selected for incarceration as eligible to receive sentence lengths."[22]

In order to test Penn State's hypothesis, the Commission replicated its analysis from the 2010 *Booker* Multivariate Analysis and the 2011 congressional testimony but excluded offenders who received probationary sentences from the population. Figure E-5 above depicts the findings.

This alternative analysis shows the same pattern as the findings of the Commission's multivariate analysis (*e.g.*, Black male offenders received longer sentences than White male offenders during all four periods, and the differences in sentence length have increased in both the *Booker* and *Gall* periods), but with a different magnitude. The demographic differences were less pronounced when probationary sentences were excluded but were still statistically significant; sentences for Black male offenders were 19.5 percent longer than sentences for White male offenders during the *Gall* period in the Commission's study, but with probation sentences excluded the difference was 14.4 percent. Nonetheless, both the Commission's methodology and the alternative methodology excluding probationary sentences showed the same pattern of increasing demographic differences during the *Booker* and *Gall* periods.

Alternative Analysis: The Penn State Study

After the Commission published its 2010 *Booker* Multivariate Analysis, researchers at Penn State performed multivariate analyses that replicated and confirmed the Commission's findings that demographic factors are associated with sentencing factors to a statistically significant degree, and that the association is becoming greater over time. These researchers made different decisions about what variables to include in the analysis. Such differences often reflect the judgment of the researcher, and the fact that researchers disagree about which variables are relevant does not diminish the validity of either researcher's work.

The key differences between the Commission's study and the Penn State study fall into two categories: specification of the population to be studied, and methodology.[23] With respect to the specification of the population to be studied, the Penn State study population differs from the Commission's in several important respects. The Penn State model:

- excluded all immigration cases;
- excluded all offenders not receiving a prison sentence (excluded all offenders sentenced to only probation or only alternative forms of confinement); and
- defined the *Koon* period to include fiscal years 2002 through 2003.

difference in the Post-*Gall* period *See* the Penn State Study, *supra* note 20 at 41.

[22] *See* the Penn State Study, *supra* note 20.

[23] *See* the Penn State Study, *supra* note 20.

Differences in the population studied could influence the findings and may explain why the magnitude of the demographic differences is smaller in the Penn State study than in the Commission's study. For example, the Penn State study excludes offenders who did not receive a prison sentence. This decision excludes a disproportionate number of White offenders. In fiscal year 2011 alone, 8,092 offenders, who had complete documentation on race and gender, received a sentence that did not include imprisonment (such sentences include receiving probation only or a period of alternative confinement only, for example). Of these 8,092 offenders, 46.6 percent were White offenders (31.9% were White male offenders and 14.7% were White female offenders). In contrast, White offenders constituted only 26.3 percent of the overall offender population in fiscal year 2011. In 2011, Black offenders comprised 19.8 percent of the federal population and 22.2 percent of offenders receiving a non-imprisonment sentence but only Black female offenders received a disproportionately high share of such sentences. Black female offenders were 9.8 percent of the offenders who received a non-imprisonment sentence but only 2.7 percent of the federal population. Black male offenders make up 12.4 percent of those offenders not receiving a sentence of imprisonment and 17.2 percent of the total federal population. The Commission's analyses included these offenders because excluding offenders who did not receive a prison sentence may have had the effect of narrowing the pool of White offenders to include only the more serious offenders of that group.

Finally, the exclusion of all immigration cases limits the ability to generalize the results of the analysis to the entire federal population, especially because immigration offenses now constitute the largest single portion of the federal caseload. The general applicability of the findings was a key goal of the Commission's research.

With respect to methodology, the Penn State model differed from the Commission's in several key respects. The Penn State model:

- controlled for criminal history twice, once as part of the presumptive sentence (guideline minimum) consistent with the Commission's methodology, and a second time as a separate variable (inconsistent with the Commission's methodology);
- did not control for mandatory minimum status; and
- in the case of a split sentence (part imprisonment, part home confinement or other alternative form of detention), included only the imprisonment portion of the sentence, and excluded any portion of a split sentence that constituted an alternative to incarceration.

Differences in methodology may also explain the differences in magnitude between the two studies. For example, the Penn State study controlled for criminal history two times – once as a separate factor, and again within the presumptive sentence. The Commission elected to control for criminal history only as it influences the presumptive sentence. The Commission made this decision because of concerns about multicollinearity (in short, multiple counting of the same information). In the Penn State study, multicollinearity could arise because two or more variables that are strongly linked with one another are both included in the model; criminal history determines, in part, the presumptive sentence. Including both variables (counting the same information two times) can influence the findings by masking the effect of some other variables in the equation.[24] In another example of methodology influencing the findings, the Commission controlled for mandatory minimum status because if the offender is subject to a mandatory minimum, the court may have limited discretion over sentence length. Finally, the exclusion of alternatives to incarceration under-reports the actual sentence imposed in cases in which the offender received a split sentence comprised of

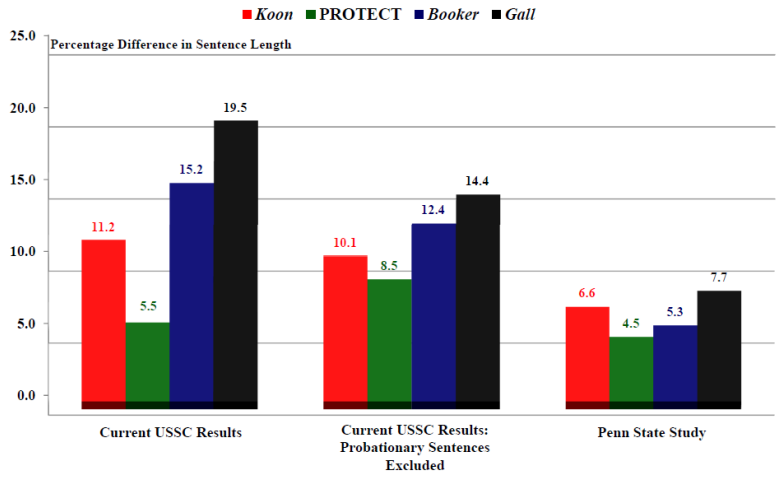
[24] For a fuller explanation of multicollinearity, *see* MULTIVARIATE REPORT, *supra note* 1, at 6.

incarceration coupled with an alternative to imprisonment such as home detention or community confinement (halfway house).

Nonetheless, even in light of the differences in populations studied and in methodology between the Penn State study and the Commission's study, the Penn State study found an identical pattern of findings with respect to statistically significant demographic differences in sentence length. The only difference in the findings was the magnitude: the Penn State study's findings reflected demographic differences that were less pronounced than those found in the Commission's study.[25]

Figure E-6 depicts a comparison of the findings of the Commission's study using the Commission's methodology, the findings of the Commission's study with probationary sentences excluded from the population, and the findings of the Penn State study. The findings in the Commission's study were replicated in each of the alternative models. The only difference was that the magnitude of the demographic differences was less pronounced in the two alternative models.

Figure E-6
Comparison of Multivariate Results
Differences in Sentence Length between Black Male and White Male Offenders
***Koon* Period through *Gall* Period**



SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11 and "Racial Disparity in the Wake of the Booker/Fanfan Decisions: An Alternative Analysis to the USSC's 2010 Report" by Jeffrey Ulmer, etal

[25] *But see* Sonja Starr & M. Marit Rehavi, *Racial Disparity in Federal Criminal Charging and Its Sentencing Consequences* (U. Mich. L. & Econ. Working Paper Series, Paper No. 12-002, 2012), available at http://ssrn.com/abstract=1985377. The researchers use what they describe as a new empirical approach to account for prosecutorial decisions and conclude that most of the differences in sentencing outcomes between White male and Black male offenders can be explained by prosecutors' charging decisions in initial charging and in whether to charge an offense carrying a statutory mandatory minimum penalty. The researchers examined only a small segment of the federal offender population, however, choosing to exclude from their analysis all immigration and drug trafficking offenses, which together comprise more than half of all federal felony convictions annually. The researchers also excluded all non-citizens and grouped Hispanic offenders with White offenders. Finally, the researchers excluded variables that the Commission included, such as whether the offender obtained relief from a statutory mandatory minimum penalty.

ADDITIONAL MULTIVARIATE REGRESSION ANALYSES

The Commission conducted further analyses focusing on the specific offense types and on sentences within and outside the guideline range for three reasons: first, to identify more precisely where demographic differences may be occurring; second, to determine whether the same pattern of results would be replicated when studying sentencing outcomes other than sentence length, and when studying specific offenses; and third, to identify and measure the extent to which any particular factors, such as type of offense or sentence relative to the range contribute to the overall finding of demographic differences in sentencing.

Sentence Relative to the Guideline Range

For this section of the report, the Commission analyzed within range sentences, government sponsored below range sentences, non-government sponsored below range sentences, and the likelihood that an offender would receive a non-government sponsored below range sentence. The analysis showed statistically significant demographic differences in sentence length for offenders receiving within range sentences, government sponsored below range sentences based on substantial assistance, and government sponsored below range sentences based on other reasons for each of the periods under study. No analysis was performed for government sponsored below range sentences based on early disposition programs because there was insufficient racial diversity among those offenders to perform such an analysis. Statistically significant demographic differences were also found in sentence length of offenders receiving non-government sponsored below range sentences during the *Booker* and *Gall* periods.

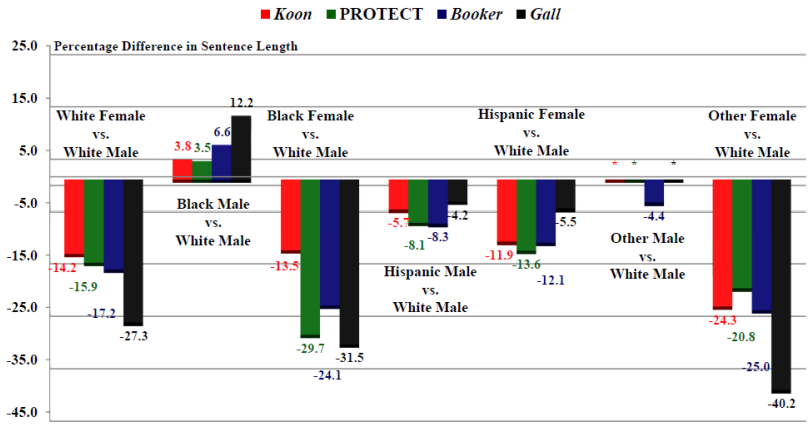
Within Range Sentences

Figure E-7 depicts the results of the multivariate analysis of within range sentences. The analysis found that the differences in sentence length for Black male offenders who received within range sentences compared to White male offenders who received within range sentences, were statistically significant but steady during the *Koon* and PROTECT Act periods, and have increased in the *Booker* and *Gall* periods. During the *Koon* period, the sentences of Black male offenders who received within range sentences were 3.8 percent longer than those of White male offenders who received within range sentences. This difference was 3.5 percent during the PROTECT Act period but increased to 6.6 percent longer and 12.2 percent longer in the *Booker* and *Gall* periods respectively.

The differences in sentence length between Hispanic male offenders and White male offenders who received within range sentences varied over the four time periods studied, but Hispanic male offenders received shorter sentences than White male offenders during all periods. In the *Koon* period, Hispanic male offenders who received within range sentences received sentences 5.7 percent shorter than White males who received within range sentences. That difference was 8.1 percent during the PROTECT Act period and 8.3 percent during the *Booker* period. However, in the *Gall* period, the differences in sentence length between the two groups decreased: Hispanic male offenders who received within range sentences received sentences 4.2 percent shorter than White male offenders who received within range sentences during the *Gall* period.

There was only one period in which there were statistically significant differences in the sentences of Other Race male offenders compared to

Figure E-7
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
Within Range
***Koon* Period through *Gall* Period**



•Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

White male offenders. During the *Booker* period, Other Race male offenders who received within range sentences received sentences that were 4.4 percent shorter than those of White male offenders who received within range sentences.

Across all periods, female offenders who received within range sentences, regardless of their race, were sentenced to terms shorter than those of White male offenders who received within range sentences. For White female offenders compared to White male offenders, this difference has increased over time. In the *Koon* period, White female offenders who received within range sentences received sentences 14.2 percent shorter than White male offenders who received within range sentences. This difference increased to 15.9 in the PROTECT Act period, 17.2 percent in the *Booker* period, and 27.3 percent in the *Gall* period.

Black females who received within range sentences were also sentenced to shorter terms than White males who received within range sentences. The difference also has increased over time. In the *Koon* period, Black female offenders who received within range sentences received sentences 13.5 percent shorter than White males who received within range sentences. In the PROTECT Act period, this difference increased to 29.7 percent shorter sentences. In the *Booker* period, Black females who received within range sentences received sentences 24.1 percent shorter than White males who received within range sentences; that difference increased to 31.5 percent in the *Gall* period.

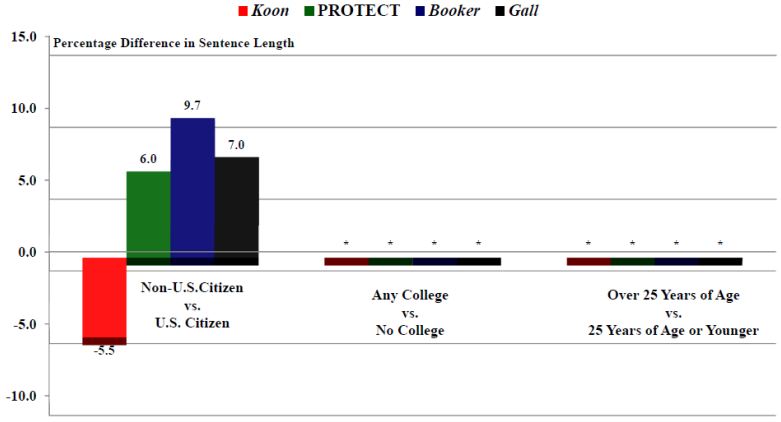
Sentences for Hispanic female offenders follow a different pattern. Sentences for Hispanic females who received within range sentences were 11.9 percent shorter than those of White male offenders who received within range sentences during the *Koon* period. That difference increased to 13.6 percent during the PROTECT Act period, and 12.1 percent in the *Booker* period. However, in the *Gall* period, Hispanic female offenders who received within range sentences received sentences only 5.5 percent shorter than White male offenders who received within range sentences.

The differences in sentence length between Other Race female offenders who received within range sentences and White male offenders who received within range sentences were relatively steady from the *Koon* through *Booker* periods. Other Race female offenders who received within range sentences received sentences 24.3 percent shorter than White male offenders who received within range sentences during the *Koon* period, 20.8 percent shorter during the PROTECT Act period and 25.0 percent shorter during the *Booker* period. However, in the *Gall* period, that difference increased to 40.2 percent, the largest percentage difference for all race/gender pairs for all time periods.

Figure E-8 below depicts the results of the multivariate analysis as to citizenship, education, and age for within range sentences. The Commission's analysis found that, during the *Koon* period, non-citizen offenders who received within range sentences received sentences 5.5 percent shorter than United States citizens who received within range sentences. From then on, non-citizens who received within range sentences received longer sentences than those of United States citizens who received within range sentences. During the PROTECT Act period, the sentences of non-citizens who received within range sentences were 6.0 percent longer than those of United States citizens who received within range sentences. This difference increased to 9.7 percent in the *Booker* period and then decreased to 7.0 percent in the *Gall* period.

The Commission's analysis found that for all periods there were no statistically significant differences in the sentence length of offenders who

Figure E-8
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
Within Range
***Koon* Period through *Gall* Period**



•Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

had attended college and received within range sentences compared to offenders who had not attended college and received within range sentences. This was also true when comparing sentence length differences for offenders over the age of 25 who received within range sentences compared with those offenders 25 years of age or younger who received within range sentences.

Substantial Assistance Departure Sentences

The Commission then examined offenders who received below range sentences to determine whether demographic differences were present. The analysis of below range sentences based on substantial assistance departures is set forth in Figure E-9.

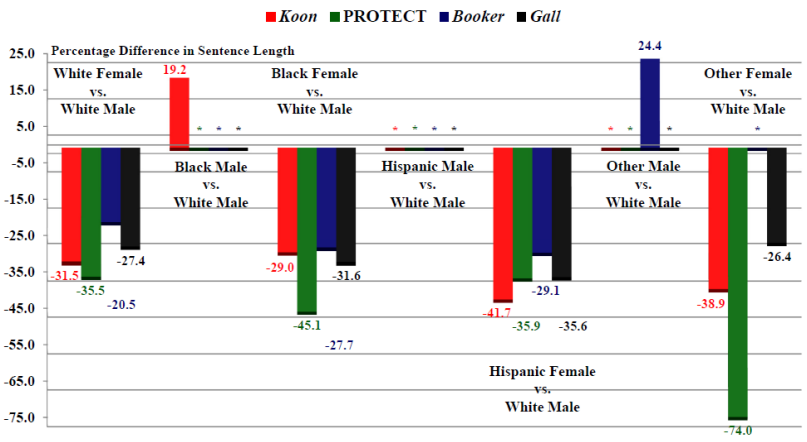
During the *Koon* period, Black male offenders who received substantial assistance departures received sentences 19.2 percent longer than White male offenders who received substantial assistance departures. There were no statistically significant differences between the sentences of Black and White male offenders who received substantial assistance departures during any other period.

With the exception of Other Race female offenders during the *Booker* period, female offenders of all races who received substantial assistance departures received shorter sentences than White male offenders who received substantial assistance departures. During the *Koon* period, sentence length for White female offenders who received substantial assistance departures was 31.5 percent shorter than for White male offenders who received substantial assistance departures. During the PROTECT Act period this difference increased to 35.5 percent. During the *Booker* period the difference was 20.5 percent, and during the *Gall* period the difference was 27.4 percent.

Black female offenders who received substantial assistance departures also received shorter sentences than White male offenders who received substantial assistance departures. During the *Koon* period, Black female offenders who received substantial assistance departures received sentences 29.0 percent shorter than White male offenders who received substantial assistance departures. In the PROTECT Act period, this difference increased to 45.1 percent. In the *Booker* period, Black females who received a substantial assistance departure received sentences 27.7 percent shorter than White male offenders who received substantial assistance departures. During the *Gall* period, the difference increased to 31.6 percent.

Sentences for Hispanic female offenders who received substantial assistance departures followed a somewhat similar pattern. During the *Koon* period, sentences for Hispanic female offenders who received a substantial assistance departure were 41.7 percent shorter than for White male offenders who received a substantial assistance departure. That difference decreased to 35.9 percent during the PROTECT Act period, decreased again to 29.1 percent in the *Booker* period, and then increased to 35.6 percent in the *Gall* period.

Figure E-9
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
Substantial Assistance
***Koon* Period through *Gall* Period**

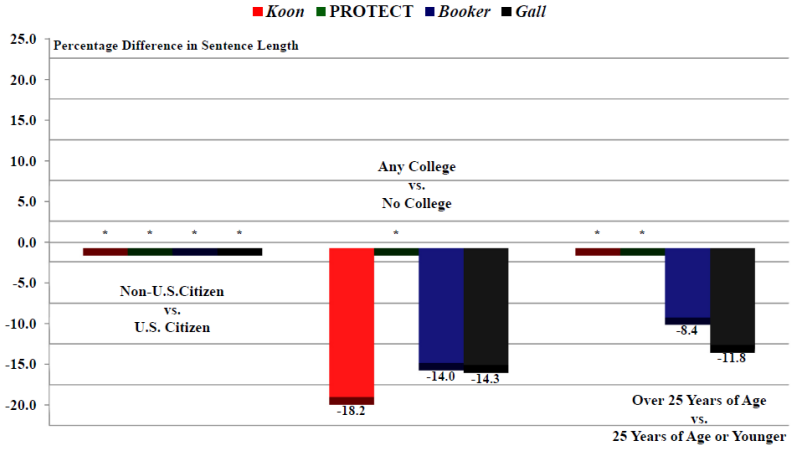


•Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

The differences in sentence lengths between Other Race female offenders and White male offenders who received a substantial assistance departure have varied over the four time periods.[26] Other Race female offenders who received a substantial assistance departure received sentences 38.9 percent shorter than White male offenders who received a substantial assistance departure during the *Koon* period. That difference increased to 74.0

[26] The high fluctuations for this comparison were mainly due to the small population of Other Race female offenders who received substantial assistance departures.

Figure E-10
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
Substantial Assistance
***Koon* Period through *Gall* Period**



*Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

percent during the PROTECT Act period and then decreased to 26.4 percent during the *Gall* period. The differences in sentence lengths between Other Race female offenders who received substantial assistance departures and White male offenders who received substantial assistance departures were not statistically significant during the *Booker* period.

Figure E-10 depicts the findings of the analysis regarding citizenship, education, and age for cases in which there was a substantial assistance departure. There were no statistically significant differences between the sentence lengths of non-citizen offenders compared to sentence lengths of United States citizens who received substantial assistance departures.

The differences in sentences for offenders with some college education who received substantial assistance departures compared to offenders with no college education who received substantial assistance departures were statistically significant in three time periods. In the *Koon* period, offenders with any college education who received substantial assistance departures received sentences 18.2 percent shorter than offenders with no college education who received substantial assistance departures. During the *Booker* and *Gall* periods, offenders with any college education who received substantial assistance departures received sentences 14.0 and 14.3 percent shorter, respectively, than offenders with no college education who received substantial assistance departures. In the PROTECT Act period, there were no statistically significant differences between the sentence lengths of offenders with any college education who received substantial assistance departures compared to offenders with no college education who received substantial assistance departures.

The differences between sentences of offenders over the age of 25 who received a substantial assistance departure compared with those 25 years of age or younger who received a substantial assistance departure were statistically significant in two of the four time periods. While there were no statistically significant differences between the two groups in the *Koon* and PROTECT Act period, in the *Booker* period, offenders over the age of 25 who received a substantial assistance departure received sentences 8.4 percent shorter than offenders who were 25 years of age or younger who received a substantial assistance departure. That difference increased to 11.8 percent in the *Gall* period.

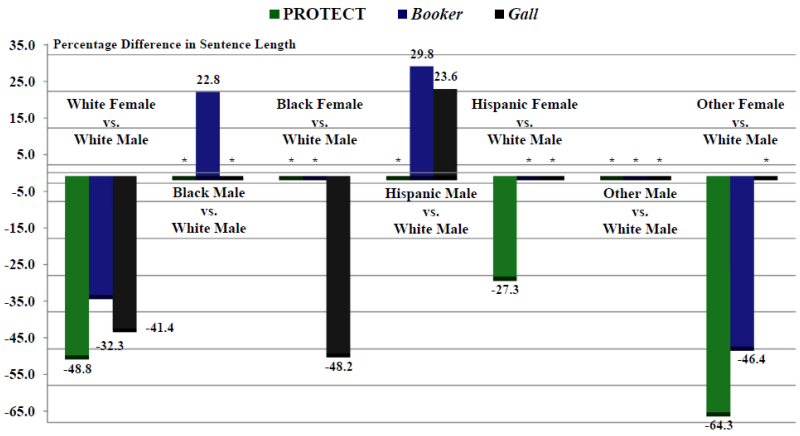
Other Government Sponsored Below Range Sentences

Figure E-11 depicts the findings of the Commission's multivariate analysis of other government sponsored below range sentences. Only three time periods are included in this multivariate analysis: the PROTECT Act, *Booker*, and *Gall* periods. Cases from the *Koon* period are excluded from the analysis because the Commission did not collect data during that period in a manner that would indicate whether a sentence below the guidelines range was initiated by the government or the court. In addition, Early Disposition Program departures are not included in this analysis[27] because there was insufficient racial diversity among those offenders to perform such an analysis.

The analysis found that the differences in sentence length comparing race/gender pairs were statistically significant during some periods. During the *Booker* period, sentence lengths for Black males who received an other government sponsored below range sentence received sentences 22.8 percent longer than White males who received other government sponsored below range sentences. There were no statistically significant differences between the

[27] For an explanation of EDP departures, *see* Part A.

Figure E-11
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
Other Government Sponsored Below Range
PROTECT Act Period through *Gall* Period



•Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

sentence lengths of Other Race male offenders who received an other government sponsored below range sentence and White male offenders who received an other government sponsored below range sentence during any time period.

The differences in sentence length between Hispanic male offenders and White male offenders who received an other government sponsored below range sentence were statistically significant during two periods. In the *Booker* period, Hispanic male offenders who received an other government sponsored below range sentence received sentences 29.8 percent longer than White male offenders who received an other government sponsored below range sentence. During the *Gall* period, the sentences of Hispanic male offenders who received other government sponsored below range sentences were 23.6 percent longer than those of White male offenders who received other government sponsored below range sentences. There were no statistically significant differences between these two groups in the PROTECT Act period.

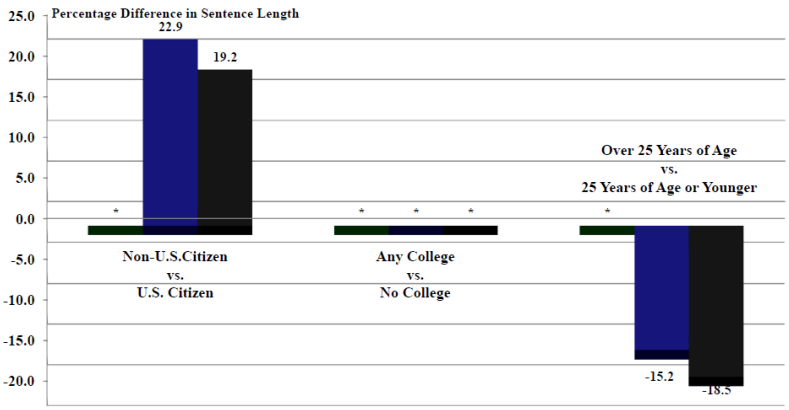
For the periods in which there were statistically significant differences, female offenders of all races who received an other government sponsored below range sentence were sentenced to shorter terms than White male offenders. In the PROTECT Act period, the sentences of White female offenders who received an other government sponsored below range sentence were 48.8 percent shorter than those of White males who received an other government sponsored below range sentence. The difference was 32.3 percent during the *Booker* period and 41.4 percent during the *Gall* period.

The sentences of Black female offenders who received an other government sponsored below range sentence were 48.2 percent shorter than those of White male offenders who received an other government sponsored below range sentence during the *Gall* period, the only period in which there were statistically significant differences. Other Race female offenders who received an other government sponsored below range sentence received sentences 64.3 percent shorter than White male offenders who received an other government sponsored below range sentence during the PROTECT Act period, and 46.4 percent shorter during the *Booker* period. These were the largest sentence length differences between race/gender pairs over all time periods.

Sentences for Hispanic female offenders who received an other government sponsored below range sentence were 27.3 percent shorter than those of White male offenders who received an other government sponsored below range sentence during the PROTECT Act period. There were no statistically significant differences between the sentences of Hispanic female offenders who received an other government sponsored below range sentence and White male offenders who received an other government sponsored below range sentence during the *Booker* and *Gall* periods.

Figure E-12 shows the Commission's findings of the multivariate analysis as to citizenship, education, and age specific to other government sponsored below range sentences. In the *Booker* period, non-citizen offenders who received other government sponsored below range sentences received 22.9 percent longer sentences than United States citizens. In the *Gall* period, the difference decreased to 19.2 percent longer sentences for non-citizens. There was no statistically significant difference in sentence length between offenders with at least some college education compared to offenders with no college education who received an other government sponsored below range sentence. In the *Gall* period, offenders over the age of 25 who received an other government sponsored below range sentence received

Figure E-12
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
Other Government Sponsored Below Range
PROTECT Period through *Gall* Period



•Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

sentences 18.5 percent shorter than offenders who were 25 years of age or younger and received an other government sponsored below range sentence. The difference during the *Booker* period was 15.2 percent.

Non-Government Sponsored Below Range Sentences

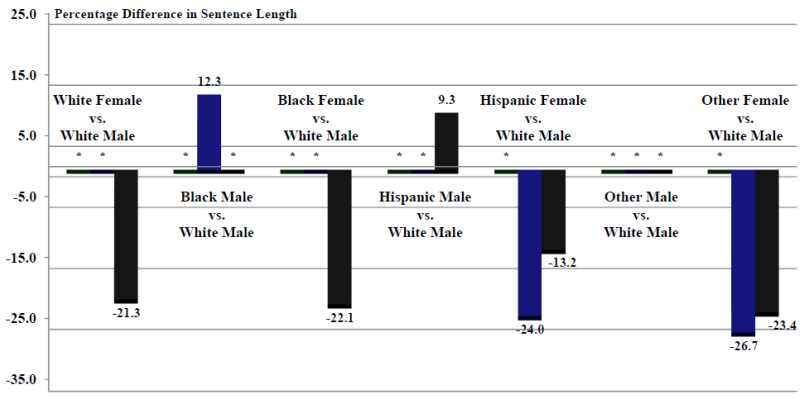
Figure E-13 depicts the results of the Commission's multivariate analysis of non-government sponsored below range sentences, *i.e.*, those sentences falling below the guideline range for any reason not initiated by the government. Only three time periods are included in this multivariate analysis: the PROTECT Act, *Booker*, and *Gall* periods. Cases from the *Koon* period are excluded from the analysis because the Commission did not collect data during that period in a manner that would indicate whether the below range sentence was sponsored by the government, except in cases involving substantial assistance motions.

The analysis found that the differences in sentence length comparing race/gender pairs were statistically significant during some of the periods. Comparing Black male offenders to White male offenders who received a non-government sponsored below range sentence, the differences in sentence length between the two groups were statistically significant only in the *Booker* period, when Black male offenders who received a non-government sponsored below range sentence received sentences 12.3 percent longer than White male offenders who received a non-government sponsored below range sentence.

Similarly, the differences in sentence length between Hispanic male offenders and White male offenders who received a non-government sponsored below range sentence were statistically significant in only one period. In the *Gall* period, Hispanic male offenders who received a non-government sponsored below range sentence received sentences 9.3 percent longer than White male offenders who received a non-government sponsored below range sentence. There were no statistically significant differences between the sentences imposed on Other Race male offenders and White male offenders who received a non-government sponsored below range sentence.

Of the time periods in which there were statistically significant differences, female offenders of all races who received a non-government sponsored below range sentence received shorter sentences than White male offenders who received a non-government sponsored below range sentence. In the *Gall* period, White female offenders who received a non-

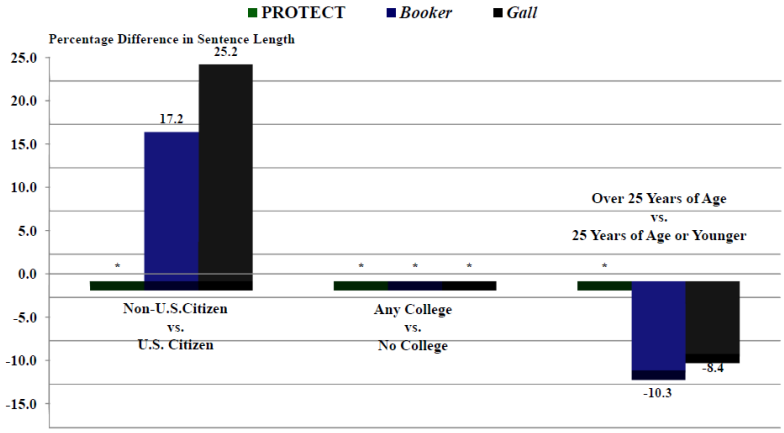
Figure E-13
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
Non-Government Sponsored Below Range
PROTECT Act Period through *Gall* Period



•Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

government sponsored below range sentence received sentences 21.3 percent shorter than White male offenders who received a non-government sponsored below range sentence. No other time period evidenced a statistically significant difference in sentence length when comparing the two groups. Similarly, Black female offenders who received a non-government sponsored below range sentence received sentences 22.1 percent shorter than White male offenders who received a non-government sponsored below range sentence during the *Gall* period. The *Gall* period was the only period in which there were statistically significant differences in sentence length between Black female offenders and White male offenders who received non-government sponsored below range sentences.

Figure E-14
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
Non-Government Sponsored Below Range
PROTECT Act Period through *Gall* Period



*Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

Sentences for Hispanic females who received a non-government sponsored below range sentence were 24.0 percent shorter than those of White males who received a non-government sponsored below range sentence during the *Booker* period. That difference decreased to 13.2 percent during the *Gall* period. Likewise, Other Race female offenders who received a non-government sponsored below range sentence received sentences 26.7 percent shorter than White males who received a non-government sponsored below range sentence during the *Booker* period. This difference decreased to 23.4 percent in the *Gall* period.

The Commission's findings regarding citizenship, education, and age for non-government sponsored below range sentences are depicted in Figure E-14. During the *Booker* period, non-citizens who received a non-government sponsored below range sentence received sentences 17.2 percent longer than United States citizens who received a non-government sponsored below range sentence. That difference increased to 25.2 percent in the *Gall* period. There were no statistically significant differences in sentence length between these two groups in the PROTECT Act period. Nor were there statistically significant differences in sentence length between offenders with at least some college education who received a non-government sponsored below range sentence and offenders with no college education who received a non-government sponsored below range sentence during any time period.

The differences between sentences of offenders over the age of 25 who received a non-government sponsored below range sentence and those 25 years of age or younger who received a non-government sponsored below range sentence were statistically significant in two of the three time periods. During the *Booker* period, offenders over the age of 25 who received a non-government sponsored below range sentence received sentences 10.3 percent shorter than offenders who were 25 years of age or younger who received a non-government sponsored below range sentence. The difference was 8.4 percent in the *Gall* period. There were no statistically significant differences in sentence length between the two groups during the PROTECT Act period.

In summary, the multivariate analysis focusing on the sentence relative to the guideline range (within range, government sponsored below range, and non-government sponsored below range) revealed statistically significant differences in sentence length for some race/gender pairings during some of the time periods studied.

Likelihood of Obtaining a Non-Government Sponsored Below Range Sentence

The Commission analyzed an offender's likelihood of receiving a non-government sponsored below range sentence in order to determine whether

the various demographic groups faced the same odds of receiving a below range sentence when courts have the discretion to impose such a sentence. This analysis was prompted by the fact that the analysis of all cases revealed some statistically significant demographic differences in sentence length but the separate sub-populations of cases grouped according to their place inside or outside the range did not reveal the same differences. For example, Black male offenders received longer sentences than White male offenders during all four periods. During the *Gall* period, the difference in sentence lengths between Black male and White male offenders was at its highest of the four periods, with Black male offenders receiving sentences 19.5 percent longer than those of White male offenders.[28] However, analysis of sentence length by type of sentence imposed did not yield the same results. In the analysis of within range sentences, for example, Black male offenders received longer sentences than White male offenders, but the magnitude of the difference was less than when analyzing all sentences: during the *Gall* period, sentences for Black male offenders who received a within range sentence were 12.2 percent longer than sentences for White male offenders who received a within range sentence. [29] In contrast, analysis of substantial assistance departures,[30] of other government sponsored below range sentences,[31] and of non-government sponsored below range sentences[32] revealed no statistically significant difference between sentence length for Black male offenders and sentence length for White male offenders who received those types of sentences during the *Gall* period.

Whereas the analysis of groups of offenders receiving different types of sentences sought to determine whether the same demographic differences observed in all sentences would be replicated when grouping offenders according to the type of sentence they received, the odds analysis sought to determine the likelihood of receiving different types of sentences in the first instance. The likelihood of an outcome occurring (here, obtaining a below range sentence) is also known as an "odds ratio," which measures the probability of the outcome occurring while controlling for independent variables.[33] If a statistically significant difference in the likelihood of obtaining a below range sentence, for example, existed between race/gender pairings, that difference could be a contributing factor in the demographic differences in sentence length observed in the analysis of all sentences.

There are difficulties, however, in studying all types of below range sentences, which caused the Commission to study only the likelihood of obtaining a non-government sponsored below range sentence. With respect to government sponsored below range sentences, first, an analysis of the likelihood of receiving a substantial assistance departure may be flawed because the Commission has no data from which it could determine which defendants who did not receive a substantial assistance departure were eligible for a substantial assistance departure in the first instance. Second, an analysis of the likelihood of receiving an other government sponsored downward departure also may be flawed. In these analyses, the category "other government sponsored below range sentences" includes all government sponsored below range sentences other than substantial assistance departures. A large portion of those other below range sentences are EDP departures, and most districts did not have EDP programs during the periods studied. In addition, because there is little racial diversity in the offenders who receive EDP departures, their inclusion might mask important findings. Finally, with respect to other government sponsored below range sentences that result from plea agreements, the Commission had no data regarding which offenders were offered the opportunity to accept a plea bargain, therefore an analysis of the odds of receiving a below range sentence based on a plea agreement cannot be performed using Commission data. For these reasons, the following analysis is limited to determining the

[28] *See* Part E, *supra* at 9.

[29] *See* Part E, *supra* at 14.

[30] *See* Part E, *supra* at 16.

[31] *See* Part E, *supra* at 18.

[32] *See* Part E, *supra* at 19.

[33] Odds ratios are calculated from a regression analysis on a binary outcome measure (in the case of this analysis, the binary outcome is receiving a non-government sponsored below range sentence or not). This type of regression analysis is known as "logistic regression." Similar to a regression analysis on a continuous variable, logistic regression shows the effect of the outcome variable, controlling for the independent variables in the model.

likelihood of obtaining a non-government sponsored below range sentence.

The independent variables for this analysis are the same as in the regression analysis of all cases. The Commission's analysis measured the likelihood of an offender obtaining a non-government sponsored below range sentence only when the sentencing court had an option before it to depart or vary based on a reason not sponsored by the government. Therefore, this analysis excludes cases in which no below range option was available. This occurred, for example, when a mandatory minimum became the applicable guideline range, and in cases in which the court could impose a below range sentence based on factors outside of the court's own discretion, such as cases involving a government motion pursuant to an early disposition program, a plea agreement, or substantial assistance. This analysis also excludes cases in which an above range sentence was imposed. Only the PROTECT Act, *Booker*, and *Gall* time periods are included in this analysis.

Figure E-15 depicts the results of the Commission's findings. The analysis found that Black male offenders were less likely to receive a non-government sponsored below range sentence than White male offenders during all of the periods studied. In the PROTECT Act period, Black male offenders were 25.0 percent less likely to receive a non-government sponsored below range sentence than White male offenders. During the *Booker* period, Black male offenders were 20.9 percent less likely than White male offenders to receive a non-government sponsored below range sentence, and during the *Gall* period, Black male offenders were 25.2 percent less likely to receive a non-government sponsored below range sentence than White male offenders. This analysis indicated that Black male offenders were consistently less likely to receive a non-government sponsored below range sentence compared to White male offenders.

During the PROTECT Act period, Hispanic males were 15.7 percent less likely to receive a non-government sponsored below range sentence than White male offenders. Hispanic male offenders were 25.3 percent less likely to receive such a sentence in the *Booker* period and 31.6 percent less likely in the *Gall* period.

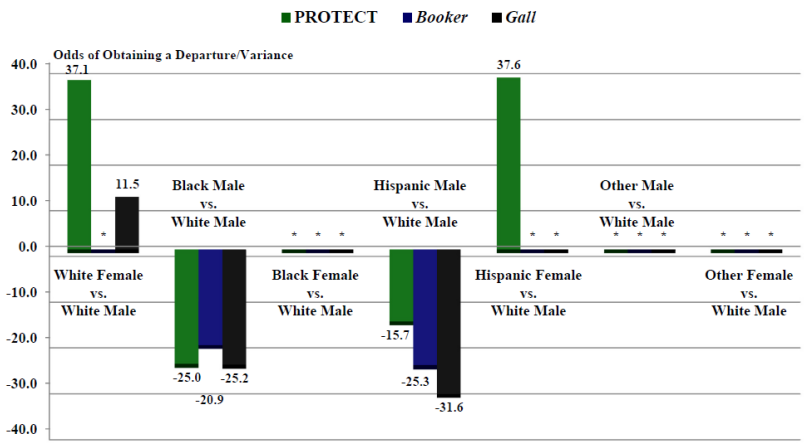
There were no statistically significant differences in any time period when comparing the likelihood of an Other Race male offender receiving a non-government sponsored below range sentence to the likelihood of a White male offender receiving such a sentence.

White female offenders were 37.1 percent more likely than White male offenders to receive a non-government sponsored below range sentence during the PROTECT Act period and 11.5 percent more likely to receive such a sentence in the *Gall* period. There were no statistically significant differences in the *Booker* period when comparing the likelihood of White female offenders receiving a non-government sponsored below range sentence to the likelihood of White male offenders receiving such a sentence.

When comparing Black female offenders to White male offenders, there was no statistically significant difference between the two groups regarding the likelihood of receiving a non-government sponsored below range sentence. The likelihood of Hispanic females receiving a non-government sponsored below range sentence was 37.6 percent higher than that of White male offenders during the PROTECT Act period. There were no statistically significant differences between the two groups during the *Booker* or *Gall* periods.

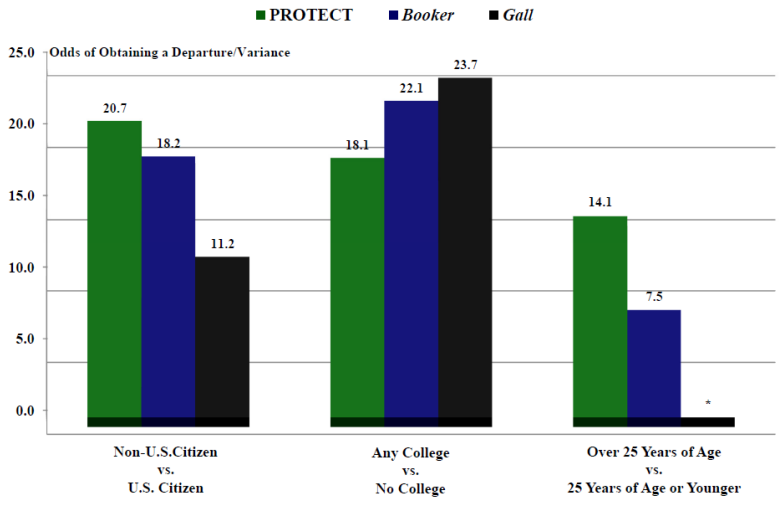
Figure E-15

Odds of Obtaining a Non-Government Sponsored Below Range Sentence
PROTECT Act Period through *Gall* Period



•Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

Figure E-16
Odds of Obtaining a Non-Government Sponsored Below Range Sentence
PROTECT Act Period through *Gall* Period



•Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

As depicted in Figure E-16, the Commission's analysis found that during the PROTECT Act period, non-citizens had a 20.7 percent higher likelihood of receiving a non-government sponsored below range sentence than United States citizens. The difference decreased during the *Booker* period to 18.2 percent, and then to 11.2 percent during the *Gall* period.

The differences in the likelihood of receiving a non-government sponsored below range sentence for offenders with at least some college education compared to offenders with no college education showed the opposite pattern. In the PROTECT Act period, offenders with at least some college education were 18.1 percent more likely to receive a non-government sponsored below range sentence than offenders with no college education. The difference increased to 22.1 percent in the *Booker* period and 23.7 percent in the *Gall* period.

The differences between sentences of offenders over the age of 25 compared with those 25 years of age or younger were statistically significant in two time periods. During the PROTECT Act period, offenders over the age of 25 were 14.1 percent more likely to receive a non-government sponsored below range sentence than offenders who were 25 years of age or younger. During the *Booker* period, those over 25 years of age were 7.5 percent more likely to receive a non-government sponsored below range sentence, and during the *Gall* period there were no statistically significant differences between the two groups.

Analysis of Specific Offense Types

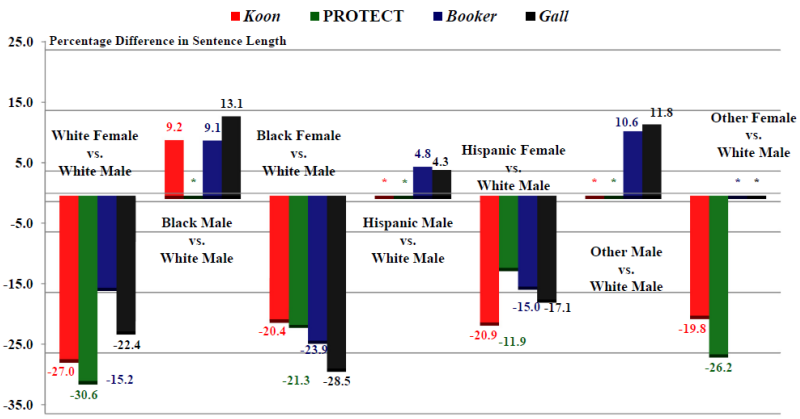
The Commission expanded its multivariate analysis to examine specific offense types. While the multivariate analyses described above controlled for offense type while analyzing all cases, this analysis examines one offense type at a time by limiting the pool of cases to a specific offense type. The Commission performed this additional analysis for two reasons: first, to determine whether its findings on demographic differences in overall sentencing outcomes would be replicated in the major offense types; and second, to determine whether demographic differences in sentences for different offense types contributed to the demographic differences observed for all sentences. The Commission analyzed three major offense types for which there was a sufficient number of cases and sufficient diversity in the demographic factors: drug trafficking, fraud, and firearms. Immigration and child pornography offenses lacked sufficient diversity to support a robust analysis. Child pornography offenders are overwhelmingly White male offenders, and immigration offenders are overwhelmingly Hispanic offenders.

Consistent with the results of the analysis of all cases, demographic factors were associated with sentence length to a statistically significant extent during some of the time periods studied for drug trafficking, fraud, and firearms offenders.

Drug Trafficking Offenses

Figure E-17 depicts the results of the Commission's multivariate analysis specific to drug trafficking offenses. This analysis includes offenders involved in trafficking of the five major drug types – powder cocaine, crack cocaine, marijuana, methamphetamine, and heroin – while controlling for the type of drug involved in the offense. Controlling for drug type means, for example, that crack cocaine offenders are compared only to other crack cocaine offenders, while methamphetamine offenders are compared only to other methamphetamine offenders. The analysis found that the differences in sentence length for Black male drug offenders compared to White male drug offenders have varied over time. In

Figure E-17
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
Drug Trafficking Offenders
***Koon* Period through *Gall* Period**



•Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

the *Koon* period, Black male drug offenders received sentences that were 9.2 percent longer than White male drug offenders. In the PROTECT Act period, there were no statistically significant differences in sentence length between Black male and White male drug offenders. The differences between these two groups were 9.1 percent in the *Booker* period and 13.1 percent during the *Gall* period.

The differences in sentence length between Hispanic male and White male drug offenders were statistically significant in two of the four time periods studied. In the *Booker* period, Hispanic male drug offenders received sentences 4.8 percent longer than White male drug offenders; that difference was 4.3 percent during the *Gall* period. There were no statistically significant differences between the sentences for the two groups during the *Koon* or PROTECT Act periods.

Similarly, there were no statistically significant differences in sentence length between Other Race male and White male drug offenders during the *Koon* or PROTECT Act periods. However, during the *Booker* period, Other Race male drug offenders received sentences 10.6 percent longer than White male drug offenders. In the *Gall* period, the differences between the sentences for the two groups increased to 11.8 percent.

Female drug offenders of all races received sentences that were shorter than those of White male drug offenders in nearly all time periods. In the *Koon* period, White female drug offenders received sentences 27.0 percent shorter than White male drug offenders. These differences increased to 30.6 percent in the PROTECT Act period, but decreased to 15.2 percent during the *Booker* period. White female drug offenders received sentences 22.4 percent shorter than White male drug offenders during the *Gall* period.

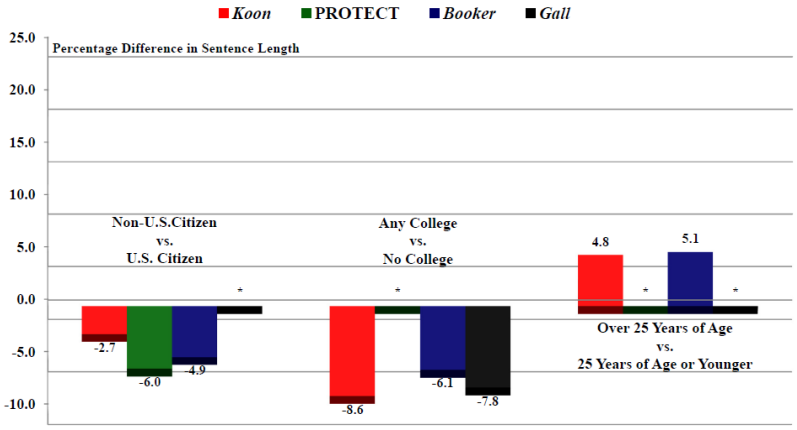
Sentence length for Black female drug offenders compared to White male drug offenders followed a different pattern, with Black female drug offenders receiving increasingly shorter sentences over the four time periods. In the *Koon* period, Black female drug offenders received sentences 20.4 percent shorter than White male drug offenders. These differences increased steadily to 28.5 percent in the *Gall* period.

Sentences for Hispanic female drug offenders were 20.9 percent shorter than those of White male drug offenders during the *Koon* period, 11.9 percent shorter during the PROTECT Act period, 15.0 percent shorter during the *Booker* period, and 17.1 percent shorter in the *Gall* period.

Other Race female drug offenders received sentences 19.8 percent shorter than White male drug offenders during the *Koon* period, and 26.2 percent shorter during the PROTECT Act period. There were no statistically significant differences in sentence length between Other Race female drug offenders and White male drug offenders during the *Booker* and *Gall* periods.

Figure E-18 depicts the results of the analysis as to citizenship, education, and age for drug trafficking offenses. Non-citizen drug offenders received shorter sentences than United States citizen drug offenders in three of the four time periods. During the *Koon* period, non-citizen drug offenders received sentences 2.7 percent shorter than United States citizen drug offenders. The differences in sentence length for non-citizen drug offenders increased in the PROTECT Act period to 6.0 percent, and then decreased in the *Booker* period to 4.9 percent. There were no statistically significant differences in sentence length between these two groups in the *Gall* period.

Figure E-18
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
Drug Trafficking Offenders
***Koon* Period through *Gall* Period**



•Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

The differences in sentences for drug offenders with at least some college education compared to drug offenders with no college education were also statistically significant in three time periods. Drug offenders with at least some college education received sentences 8.6 percent shorter than drug offenders with no college experience in the *Koon* period, 6.1 percent shorter in the *Booker* period, and 7.8 percent shorter in the *Gall* period. In the PROTECT Act period, there were no statistically significant differences in sentence length between these two groups.

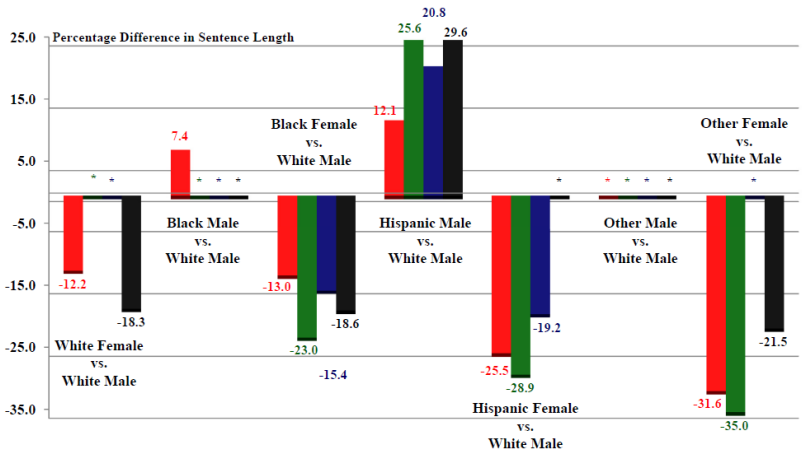
Finally, there were differences between sentences of drug offenders over the age of 25 compared with those 25 years of age or younger during the *Koon* and *Booker* periods, with drug offenders over the age of 25 receiving sentences 4.8 percent and 5.1 percent longer, respectively, than drug offenders 25 years of age or younger. During the PROTECT Act and *Gall* periods, there were no statistically significant sentencing differences between these two groups of offenders.

Fraud Offenses

The findings of the Commission's multivariate analysis specific to fraud offenses differed from the drug trafficking analysis with respect to the comparison between Black male and White male offenders, but are similar to the analysis for female offenders. Figure E-19 shows that the differences in sentence length for Black male fraud offenders compared to White male fraud offenders were statistically significant only during one time period. During the *Koon* period, Black male fraud offenders received sentences 7.4 percent longer than White male fraud offenders. Accordingly, the differences in sentence length between Black male and White male fraud offenders were not statistically significant during the PROTECT Act, *Booker*, and *Gall* periods.

The differences in sentence length between Hispanic male and White male fraud offenders were statistically significant in each period. In the *Koon* period, Hispanic male fraud offenders received sentences 12.1 percent longer than White male fraud offenders. That difference increased to 25.6 percent in the PROTECT Act period, decreased slightly to 20.8 percent in the *Booker* period, and then increased to 29.6 percent in the *Gall* period. There were no

Figure E-19
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
Fraud Offenders
***Koon* Period through *Gall* Period**

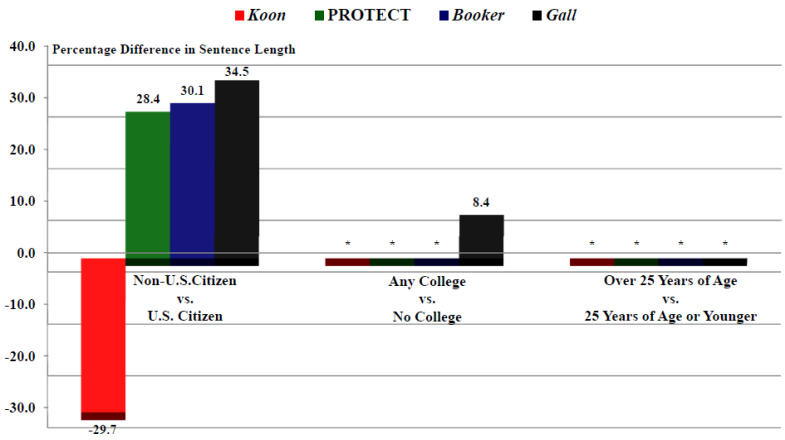


•Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

statistically significant differences in sentence length between Other Race male and White male fraud offenders during any time period.

Female fraud offenders of all races generally were sentenced to shorter terms than White male fraud offenders. In the *Koon* period, White female fraud offenders received sentences that were 12.2 percent shorter than White male fraud offenders. In the *Gall* period, White female fraud offenders received sentences 18.3 percent shorter than White male fraud offenders. During the PROTECT Act and *Booker* periods, there were no statistically significant differences in sentence length between the two groups.

Figure E-20
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
Fraud Offenders
***Koon* Period through *Gall* Period**



•Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

The differences in sentence length for Black female fraud offenders compared to White male fraud offenders were statistically significant in each period. In the *Koon* period, Black female fraud offenders received sentences 13.0 percent shorter than White male fraud offenders. This difference increased to 23.0 percent in the PROTECT Act period, and then decreased to 15.4 percent during the *Booker* period. Black female fraud offenders received sentences 18.6 percent shorter than White male fraud offenders in the *Gall* period.

Differences in sentence length for Hispanic female fraud offenders compared to White male fraud offenders were statistically significant in all periods except *Gall*. Sentences for Hispanic female fraud offenders were 25.5 percent shorter than White male fraud offenders during the *Koon* period, 28.9 percent shorter during the PROTECT Act period, and 19.2 percent shorter during the *Booker* period.

Other Race female fraud offenders received sentences that were shorter than White male fraud offenders, except during the *Booker* period, when the differences in sentence length between the two groups were not statistically significant. Other Race female fraud offenders received sentences 31.6 percent shorter than White male fraud offenders in the *Koon* period, 35.0 percent shorter in the PROTECT Act period, and 21.5 percent shorter in the *Gall* period.

The results of the analysis regarding citizenship, education, and age for fraud offenders are depicted in Figure E-20. Non-citizen fraud offenders received sentences that were 29.7 percent shorter than United States citizen fraud offenders in the *Koon* period. However, from the PROTECT Act period through the *Gall* period, non-citizen fraud offenders received sentences increasingly longer than United States citizen fraud offenders: 28.4 percent longer in the PROTECT Act period, 30.1 percent longer in the *Booker* period, and 34.5 percent longer in the *Gall* period.

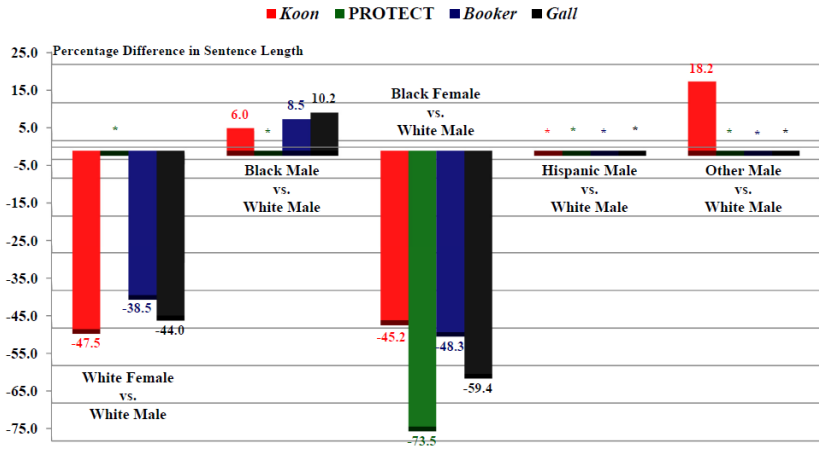
The differences in sentences for fraud offenders with at least some college education compared to fraud offenders with no college education were statistically significant in only one time period. In the *Gall* period, fraud offenders with at least some college education received sentences 8.4 percent longer than fraud offenders with no college education. There were no statistically significant sentencing differences between fraud offenders over the age of 25 and fraud offenders 25 years of age or younger during any time period.

Firearms Offenses

The Commission's multivariate analysis of firearms offenses is depicted in Figure E-21.[34] The analysis found that, excluding the PROTECT Act period during which there were no statistically significant differences, Black male firearms offenders received longer sentences than White male firearms

[34] Hispanic and Other females were excluded from this analysis because they were not sentenced for firearms offenses in sufficient numbers.

Figure E-21
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
Firearms Offenders
***Koon* Period through *Gall* Period**



•Indicates that the difference between the two groups was not statistically significant. Hispanic Females and "Other" Females are excluded from this analysis due to lack of firearm offenders of and gender.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

offenders. In the *Koon* period, Black male firearms offenders received sentences that were 6.0 percent longer than White male firearms offenders. The sentences of Black male firearms offenders were 8.5 percent longer during the *Booker* period and 10.2 percent longer during the *Gall* period than the sentences of White male firearms offenders.

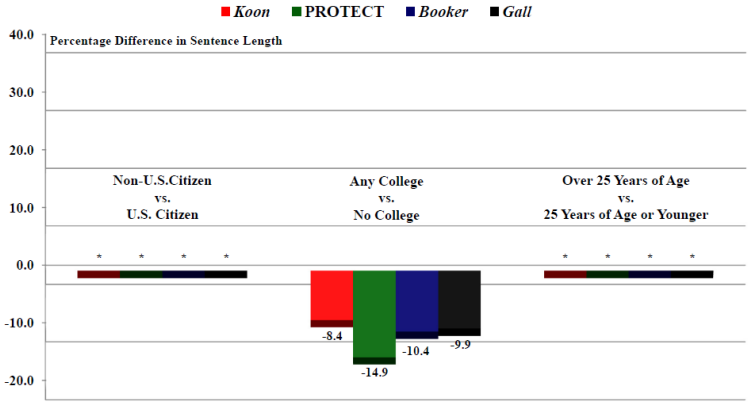
Unlike the comparison of Black male and White male firearms offenders, there were no statistically significant differences between the sentences of Hispanic male and White male firearms offenders during any time period. The sentences for Other Race male firearms offenders differed from those for White male firearms offenders only in the *Koon* period, when Other Race male firearms offenders received sentences 18.2 percent longer than White male firearms offenders. There were no statistically significant differences in the sentences of these offenders in the other three time periods.

White female and Black female firearms offenders received sentences that were shorter than sentences for White male firearms offenders during three periods (White female offenders) or all four periods (Black female offenders). In the *Koon* period, White female firearms offenders received sentences 47.5 percent shorter than White male firearms offenders. This difference was similar during the *Booker* and *Gall* periods, when White female firearms offenders received sentences 38.5 percent and 44.0 percent shorter, respectively, than White male firearms offenders. However, during the PROTECT Act period, differences in sentence length between these two groups of offenders were not statistically significant.

Differences in sentence lengths for Black female firearms offenders compared to White male firearms offenders were statistically significant during all four period. During the *Koon* period, Black female firearms offenders received sentences 45.2 percent shorter than White male firearms offenders. During the PROTECT Act period, this difference increased to 73.5 percent. In the *Booker* and *Gall* periods, Black female firearms offenders received sentences 48.3 percent and 59.4 percent shorter, respectively, than White male firearms offenders.

Regarding citizenship, education, and age, Figure E-22 depicts the results of the analysis specific to firearms offenders. There were no statistically significant differences between the sentences of non-citizen firearms offenders and those of United States citizen firearms offenders during any time period. This was also the case when comparing sentences of firearms offenders over the age of 25 to those of

Figure E-22
Multivariate Analysis
Differences in Sentence Length for Demographic Factors
Results of Multivariate Analysis
Firearms Offenders
***Koon* Period through *Gall* Period**



•Indicates that the difference between the two groups was not statistically significant. Hispanic Females and "Other" Females are excluded from this analysis due to lack of firearm offenders of these race and gender.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

offenders 25 years of age or younger.

There were statistically significant differences in sentences for firearms offenders with at least some college education compared to the sentences of firearms offenders with no college education. Firearms offenders with at least some college education received sentences 8.4 percent shorter than firearms offenders with no college education in the *Koon* period. Sentences for firearms offenders with at least some college were 14.9 percent shorter in the PROTECT Act period, 10.4 percent shorter in the *Booker* period, and 9.9 percent shorter in the *Gall* period than sentences for firearms offenders with no college.

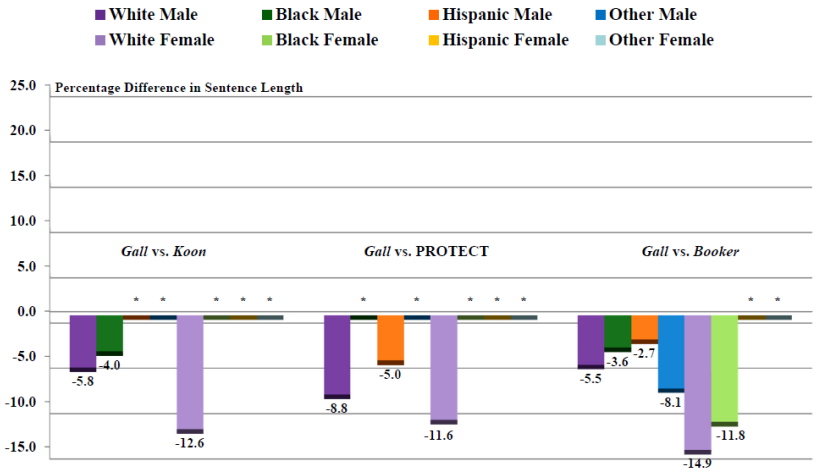
Results of Analysis of Sentence Length by Race and Gender Pairing

Finally, the Commission performed a multivariate analysis to isolate changes in sentence length over time for each individual race/gender pairing. Since *Booker*, imposition of sentences outside the guideline range has steadily increased. The overwhelming majority of sentences outside the range are below the range. This multivariate analysis seeks to answer the question: have sentences for each race/gender group changed over time, and if so, in what direction? If there are statistically significant changes in sentence length for specific race/gender groups over time, those differences could contribute to the results found in the preceding analyses.

Unlike the preceding analyses, this analysis did not compare sentencing outcomes for one race/gender pair to those of another race/gender pair (*i.e.* sentence length for White male offenders compared to sentence length for Hispanic male offenders). Instead, this analysis compared the race/gender pair in one period to the same race/gender pair in another period. The same factors were controlled for as in the analysis of all sentences, including such factors as the presumptive sentence. In other words, in this analysis an Hispanic male offender, for example, facing a guideline minimum of 46 months of imprisonment for an immigration offense during the PROTECT Act period was compared to an Hispanic male offender facing a guideline minimum of 46 months for an immigration offense in the *Gall* period. The purpose of this analysis was to determine whether the sentence length for such similarly situated offenders changed over the periods.

This analysis showed that sentence length decreased for Black male offenders, Black female offenders, White male offenders, and White female offenders between *Gall* and some previous periods. Decreases in sentence length were larger for White female offenders and White male offenders than for Black female and Black male offenders. Sentence length for Hispanic male offenders either decreased or remained the same depending on the periods compared, and sentence length did not change for the remaining groups.

Figure E-23
Change in Sentence Length for Each Race and Gender Pairing
***Koon* Period through *Gall* Period**



*Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

Figure E-23 depicts the results of these analyses.[35] White male offenders sentenced during the *Gall* period received sentences that were 5.8 percent shorter than White male offenders sentenced during the *Koon* period, while Black male offenders sentenced during the *Gall* period received sentences that were 4.0 percent shorter than Black male offenders sentenced during the *Koon* period. Sentences of White female offenders were 12.6 percent shorter during the *Gall* period than during the

[35] Figure E-23 compares the *Gall* period to the *Koon* period, the PROTECT Act period, and the *Booker* period. Figures comparing other periods are in the Appendix.

Koon period. There were no statistically significant changes in sentence length for Hispanic and Other Race offenders, or for Black female offenders between the *Gall* and *Koon* periods.

When comparing the *Gall* period to the PROTECT Act period, three race/gender pairs saw statistically significant changes in the length(s) of their sentences. White male, Hispanic male, and White female offenders had lower sentences in the *Gall* period compared to those in the PROTECT Act period. For White male offenders, *Gall* period sentences were 8.8 percent shorter, for Hispanic male offenders *Gall* period sentences were 5.0 percent shorter, and for White females *Gall* period sentences were 11.6 percent shorter. No other race/gender pairs had statistically significant changes in sentence length(s) when these periods were compared.

The comparison of the *Gall* period to the *Booker* period shows that six race/gender pairs had statistically significant results. Sentences of White male offenders were 5.5 percent shorter in the *Gall* period compared to the *Booker* period; sentences of Black male offenders were 3.6 percent shorter; sentences of Hispanic male offenders were 2.7 percent shorter, and sentences of Other race male offenders were 8.1 percent shorter. Similarly, White female offenders had sentences that were 14.9 percent shorter in the *Gall* period compared to the *Booker* period; and Black female offenders had sentences that were 11.8 percent lower in the *Gall* period compared to the *Booker* period.

Appendix: Demographic Differences in Sentencing

I. MULTIVARIATE LIST OF VARIABLES

- Dependent Variables
- Independent Variables

II. MULTIVARIATE ANALYSIS RESULTS

- All Cases
- Zero Confinement Excluded
- Sentence Position Relative to Guideline Analysis
  - *Within Range*
  - *§5K1.1 Substantial Assistance*
  - *Other Government Sponsored Below Range*
  - *Non-Government Sponsored Below Range*
    - *Odds of Obtaining*
- Offense Category Analysis
  - *Drug Trafficking Offenses*
  - *Fraud Offenses*
  - *Firearms Offenses*
- Change in Sentence Length by Race/Gender Pairing

III. ADDITIONAL SIMPLISTIC ANALYSIS RESULTS

- Within Range
- §5K1.1 Substantial Assistance
- Other Government Sponsored Below Range
- Non-Government Sponsored Below Range

MULTIVARIATE LIST OF VARIABLES

Dependent Variables

Length of confinement: The length of confinement imposed (including any alternative incarceration), with a cap of 470 months (for example, a sentence imposed of life was coded as 470). The logarithm was used, with all sentences of zero months given the value of 0.01 months as the logarithm of zero is not mathematically possible. This variable was used for the ordinal least squares analyses. The variable used was SENSPLT0.

Non-Government Below Range Sentence: This variable was used for the "Likelihood of Obtaining a Non-Government Sponsored Below Range Sentence." The variable BOOKERCD was used. This variable was coded "1" if the value for this variable was "downward departure," " downward departure with *Booker*," "below range with *Booker*," and "remaining below range."

Independent Variables

Guideline minimum: The minimum sentence, in months, the offender was subject to, taking into account all guideline, statutory and mandatory minimums. The logarithm of this variable was used, with all minimums of zero months given the value of 0.01 months, as the logarithm of zero is not mathematically possible. Minimums of life imprisonment were coded as 470 months. The variable used was GLMIN.

Type of offense committed (the variable used was GDLINEHI):

Violent offense: Offenders whose guideline sentence was controlled by the following guidelines were considered violent offenders: Chapter Two Part K offenders ("Offenses Involving Public Safety"), USSG §§2A1.1-2A1.5, 2A2.1-2A2.4, 2A4.1-2A4.2, 2A5.1-2A5.3, 2A6.1, 2A6.2, 2E1.3, 2E1.4, 2E2.1, 2B3.1, 2B3.2, and 2B3.3.

Sexual abuse offense: Offenders whose guideline sentence was controlled by the following guidelines: USSG §§2A3.1-2A3.4, and 2G1.1-2G1.3.

Pornography offense: Offenders whose guideline sentence was controlled by the following guidelines: USSG §§2G2.1-2G2. Drug trafficking offense: Offenders whose guideline sentence was controlled by the following guidelines: USSG §§2D1.1, 2D1.2, 2D1.5, 2D1.6, 2D1.7, 2D1.8, 2D1.9, 2D1.10, 2D1.11, 2D1.12, and 2D1.13.

White collar offenses: Offenders whose guideline sentence was controlled by the following guidelines: USSG §§2B1.1, 2B1.6, 2B4.1, 2B5.1, 2B5.3, 2F1.1, 2F1.2, 2R1.1, Chapter Two Part S offenses ("Money Laundering and Monetary Transaction Reporting"), and Chapter Two Part T offenses ("Offenses Involving Taxation").

Immigration offenses: Offenders whose guideline sentence was controlled by offenses in Chapter Two Part L ("Offenses Involving Immigration, Naturalization and Passports").

Other type offenses: Offenders whose guideline sentence was controlled by offenses not in the violent, sexual abuse, pornography, drug trafficking, white collar offenses, and immigration offenses.

Sentence placement relative to guideline range: Prior to the *Booker* decision, this was more commonly referred to as "departure status." Pre-*Booker* the variable used was DEPART. Upward departures were coded as "above range sentence", downward departures were coded as "below range sentence" and substantial assistance departures retained their identity. Post-*Booker*, the variable BOOKERCD was used. "Above range sentence" was coded if the values were "upward departure - guideline reason," "upward departure - guideline and 18 U.S.C. §3553 (3553) reason," "above range with *Booker* and 3553 reason," and "other above range." "Below range sentence" was coded if the values were "downward departure - guideline reason," "downward departure - guideline and 3553 reason," "below range with *Booker* and 3553 reason," "other below range," "other below range," "early disposition/§5K3.1" and "government sponsored - below range." Substantial assistance departures retained their identity.

Trial: Whether the offender was tried either by jury or by the court. The variable used was NEWCNVTN.

Mandatory minimum application: If the statutory minimum for the offense was greater than zero, a mandatory minimum applies in the case. If the sentencing court was relieved from application of the mandatory either via a substantial assistance departure or application of safety valve, the mandatory minimum does not apply and this variable was coded as "0." The variables used were STATMIN, BOOKERCD, DEPART and SAFE.

Pre-sentence custody status: The offender's pre-sentence detention status. The variable used was PRESENT.

Race and gender of offender: The variables NEWRACE (race or ethnicity of the offender) and MONSEX (gender of the offender) were merged to form one value for each offender.

Age of offender: This was coded as a dichotomous variable, separating those who were 25 years of age and younger from those older than 25 years of age. The variable used was AGE.

Educational attainment: This was coded as a dichotomous variable, separating those offenders who attended college for any period of time and those who never attended college. The variable used was EDUCATN.

Citizenship: The variable NEWCIT was used.

Drug Type: This variable was used in the "Multivariate Analysis - Drug Trafficking" analysis. Only cases that involved cocaine, crack, heroin, marijuana and methamphetamine was used. The variable COMBDRG2 was used.

MULTIVARIATE ANALYSIS RESULTS

Multivariate Analysis - All Cases
Gall

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	261407
Number of Observations Used	261407

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	23	859974	37390	17260.1	<.0001
Error	261383	566230	2.16628		
Corrected Total	261406	1426204			

Root MSE	1.47183	R-Square	0.6030
Dependent Mean	2.78314	Adj R-Sq	0.6029
Coeff Var	52.88385		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.64136	0.01718	37.33	<.0001	0
logmin	1	0.63193	0.00149	422.89	<.0001	0.65832
drugtraff	1	0.06341	0.01035	6.13	<.0001	0.01291
sexual2	1	0.07269	0.03672	1.98	0.0478	0.00252
porn	1	0.44969	0.02123	21.18	<.0001	0.03027
immigration	1	0.05162	0.01243	4.15	<.0001	0.01011
othtype	1	-0.74296	0.01800	-41.27	<.0001	-0.05816
whitecoll	1	-0.42280	0.01213	-34.86	<.0001	-0.06529
upward	1	1.14187	0.01903	60.01	<.0001	0.07504
downdep	1	-0.97350	0.00692	-140.75	<.0001	-0.19323
subasst	1	-1.17370	0.00954	-123.09	<.0001	-0.17108
mandmin2	1	0.50636	0.00936	54.10	<.0001	0.08047
NEWCNVTN	1	0.42336	0.01580	26.79	<.0001	0.03383
custody	1	0.92891	0.00827	112.35	<.0001	0.17009
whitefemale	1	-0.37270	0.01470	-25.36	<.0001	-0.03427
blackmale	1	0.17781	0.00942	18.88	<.0001	0.02987
blackfemale	1	-0.40153	0.01863	-21.55	<.0001	-0.02834
hispmale	1	0.00580	0.00958	0.61	0.5448	0.00123
hispfemale	1	-0.20146	0.01603	-12.57	<.0001	-0.01702
othermale	1	0.00043741	0.01792	0.02	0.9805	0.00003193
otherfemale	1	-0.42400	0.03480	-12.18	<.0001	-0.01525
agedummy	1	0.02490	0.00755	3.30	0.0010	0.00415
educ	1	-0.04681	0.00806	-5.81	<.0001	-0.00794
citizen	1	-0.10983	0.00950	-11.56	<.0001	-0.02316

Multivariate Analysis - Zero Confinement Excluded
Koon

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	199756
Number of Observations Used	198505
Number of Observations with Missing Values	1251

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	23	235110	10222	25170.6	<.0001
Error	198481	80606	0.40612		
Corrected Total	198504	315717			

Root MSE	0.63727	R-Square	0.7447
Dependent Mean	3.36120	Adj R-Sq	0.7447
Coeff Var	18.95966		

Parameter Estimates

Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	Intercept	1	1.73343	0.00664	261.09	<.0001
logmin		1	0.47257	0.00101	468.57	<.0001
drugtraff		1	-0.08323	0.00487	-17.10	<.0001
sexual2		1	-0.02211	0.01886	-1.17	0.2408
porn		1	-0.02467	0.01550	-1.59	0.1114
immigration		1	-0.07831	0.00644	-12.16	<.0001
othtype		1	-0.32145	0.00879	-36.55	<.0001
whitecoll		1	-0.38754	0.00579	-66.93	<.0001
upward		1	0.82355	0.01231	66.89	<.0001
downdep		1	-0.59339	0.00404	-146.84	<.0001
subasst		1	-0.61033	0.00401	-152.08	<.0001
mandmin2		1	0.55388	0.00432	128.14	<.0001
NEWCNVTN	Plea or trial indicator	1	0.30308	0.00717	42.26	<.0001
custody		1	0.30140	0.00364	82.78	<.0001
whitefemale		1	-0.20055	0.00713	-28.14	<.0001
blackmale		1	0.09608	0.00429	22.39	<.0001
blackfemale		1	-0.15202	0.00802	-18.95	<.0001
hispmale		1	-0.04359	0.00485	-8.99	<.0001
hispfemale		1	-0.20637	0.00836	-24.70	<.0001
othermale		1	-0.00322	0.00900	-0.36	0.7209
otherfemale		1	-0.11091	0.01931	-5.74	<.0001
agedummy		1	0.08832	0.00346	25.56	<.0001
educ		1	-0.02726	0.00379	-7.19	<.0001
citizen		1	-0.03552	0.00454	-7.82	<.0001

Multivariate Analysis - Zero Confinement Excluded
PROTECT

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read 59186
Number of Observations Used 59186

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	23	68071	2959.60982	7256.56	<.0001
Error	59162	24129	0.40785		
Corrected Total	59185	92200			

Root MSE	0.63863	R-Square	0.7383
Dependent Mean	3.43527	Adj R-Sq	0.7382
Coeff Var	18.59048		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	1.76679	0.01504	117.50	<.0001	0
logmin	1	0.44642	0.00169	264.69	<.0001	0.67831
drugtraff	1	0.00061385	0.00874	0.07	0.9440	0.00024259
sexual2	1	0.12737	0.03194	3.99	<.0001	0.00870
porn	1	0.00896	0.02543	0.35	0.7246	0.00078082
immigration	1	-0.15037	0.01118	-13.45	<.0001	-0.04962
othtype	1	-0.38474	0.01640	-23.46	<.0001	-0.05425
whitecoll	1	-0.37859	0.01047	-36.15	<.0001	-0.10885
upward	1	0.81178	0.02316	35.05	<.0001	0.07436
downdep	1	-0.52853	0.00829	-63.74	<.0001	-0.14143
subasst	1	-0.57255	0.00767	-74.68	<.0001	-0.16965
mandmin2	1	0.48190	0.00846	56.95	<.0001	0.14387
newcnvtn	1	0.35602	0.01252	28.44	<.0001	0.06153
custody	1	0.36294	0.00694	52.29	<.0001	0.12877
whitefemale	1	-0.16499	0.01359	-12.14	<.0001	-0.02749
blackmale	1	0.08194	0.00796	10.29	<.0001	0.02696
blackfemale	1	-0.21847	0.01610	-13.57	<.0001	-0.03011
hispmale	1	-0.06526	0.00873	-7.47	<.0001	-0.02541
hispfemale	1	-0.20338	0.01543	-13.18	<.0001	-0.03011
othermale	1	-0.04574	0.01602	-2.85	0.0043	-0.00640
otherfemale	1	-0.16917	0.03382	-5.00	<.0001	-0.01064
agedummy	1	0.08809	0.00644	13.67	<.0001	0.02949
educ	1	-0.01797	0.00714	-2.52	0.0118	-0.00573
citizen	1	0.04248	0.00845	5.03	<.0001	0.01622

Multivariate Analysis - Zero Confinement Excluded
Booker

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read 167010
Number of Observations Used 167010

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	23	183064	7959.28568	17328.2	<.0001
Error	166986	76701	0.45933		
Corrected Total	167009	259764			

Root MSE	0.67774	R-Square	0.7047
Dependent Mean	3.46775	Adj R-Sq	0.7047
Coeff Var	19.54395		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	1.67061	0.00980	170.51	<.0001	0
logmin	1	0.45822	0.00114	400.44	<.0001	0.65887
drugtraff	1	0.01776	0.00560	3.17	0.0015	0.00700
sexual2	1	0.01841	0.01978	0.93	0.3520	0.00128
porn	1	0.17377	0.01329	13.08	<.0001	0.01915
immigration	1	-0.20252	0.00697	-29.06	<.0001	-0.06905
othtype	1	-0.33448	0.01052	-31.81	<.0001	-0.04675
whitecoll	1	-0.31770	0.00678	-46.84	<.0001	-0.08897
upward	1	0.86652	0.01142	75.91	<.0001	0.10295
downdep	1	-0.48221	0.00418	-115.38	<.0001	-0.16453
subasst	1	-0.60173	0.00507	-118.64	<.0001	-0.17365
mandmin2	1	0.44269	0.00514	86.10	<.0001	0.13802
newcnvtn	1	0.39648	0.00783	50.63	<.0001	0.06928
custody	1	0.39946	0.00456	87.65	<.0001	0.13682
whitefemale	1	-0.17306	0.00878	-19.71	<.0001	-0.02837
blackmale	1	0.11656	0.00513	22.73	<.0001	0.03877
blackfemale	1	-0.16015	0.01077	-14.88	<.0001	-0.02090
hispmale	1	-0.04120	0.00567	-7.27	<.0001	-0.01615
hispfemale	1	-0.21663	0.00953	-22.73	<.0001	-0.03317
othermale	1	0.00141	0.00984	0.14	0.8859	0.00020360
otherfemale	1	-0.14017	0.02008	-6.98	<.0001	-0.00942
agedummy	1	0.10662	0.00421	25.35	<.0001	0.03450
educ	1	-0.03174	0.00458	-6.93	<.0001	-0.01005
citizen	1	0.02864	0.00531	5.39	<.0001	0.01104

Multivariate Analysis - Zero Confinement Excluded
Gall

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read 244096
Number of Observations Used 244096

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	23	294171	12790	26001.1	<.0001
Error	244072	120060	0.49190		
Corrected Total	244095	414232			

Root MSE	0.70136	R-Square	0.7102
Dependent Mean	3.30711	Adj R-Sq	0.7101
Coeff Var	21.20764		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	1.74522	0.00867	201.25	<.0001	0
logmin	1	0.42210	0.00085760	492.18	<.0001	0.67873
drugtraff	1	-0.06112	0.00506	-12.08	<.0001	-0.02251
sexual2	1	0.02906	0.01772	1.64	0.1010	0.00185
porn	1	0.17756	0.01025	17.32	<.0001	0.02205
immigration	1	-0.32891	0.00612	-53.72	<.0001	-0.11682
othtype	1	-0.44393	0.00955	-46.48	<.0001	-0.05604
whitecoll	1	-0.33364	0.00612	-54.54	<.0001	-0.08599
upward	1	0.80405	0.00911	88.30	<.0001	0.09795
downdep	1	-0.45999	0.00338	-136.01	<.0001	-0.16340
subasst	1	-0.54947	0.00473	-116.15	<.0001	-0.14139
mandmin2	1	0.51512	0.00452	114.02	<.0001	0.15050
NEWCNVTN	1	0.42717	0.00763	55.97	<.0001	0.06255
custody	1	0.43420	0.00417	104.22	<.0001	0.13429
whitefemale	1	-0.18265	0.00777	-23.51	<.0001	-0.02780
blackmale	1	0.13439	0.00465	28.92	<.0001	0.04087
blackfemale	1	-0.18978	0.01010	-18.80	<.0001	-0.02161
hispmale	1	-0.00962	0.00472	-2.04	0.0415	-0.00367
hispfemale	1	-0.15179	0.00809	-18.76	<.0001	-0.02247
othermale	1	-0.02086	0.00901	-2.31	0.0206	-0.00268
otherfemale	1	-0.16458	0.01896	-8.68	<.0001	-0.00958
agedummy	1	0.10732	0.00371	28.90	<.0001	0.03223
educ	1	-0.01699	0.00408	-4.16	<.0001	-0.00502
citizen	1	0.05689	0.00468	12.15	<.0001	0.02163

Multivariate Analysis - Within Range
Koon

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	135110
Number of Observations Used	134160
Number of Observations with Missing Values	950

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	704432	35222	45874.1	<.0001
Error	134139	102991	0.76779		
Corrected Total	134159	807423			

Root MSE	0.87624	R-Square	0.8724
Dependent Mean	2.83546	Adj R-Sq	0.8724
Coeff Var	30.90278		

Parameter Estimates

Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	Intercept	1	0.70344	0.00989	71.15	<.0001
logmin		1	0.75923	0.00108	702.40	<.0001
drugtraff		1	-0.03343	0.00805	-4.15	<.0001
sexual2		1	0.01170	0.03012	0.39	0.6976
porn		1	0.09614	0.02503	3.84	0.0001
immigration		1	0.22293	0.01076	20.72	<.0001
othtype		1	-0.28855	0.01322	-21.83	<.0001
whitecoll		1	-0.23635	0.00908	-26.02	<.0001
mandmin2		1	0.21761	0.00758	28.72	<.0001
NEWCNVTN	Plea or trial indicator	1	0.17714	0.01074	16.49	<.0001
custody		1	0.31729	0.00616	51.50	<.0001
whitefemale		1	-0.15290	0.01155	-13.24	<.0001
blackmale		1	0.03735	0.00709	5.27	<.0001
blackfemale		1	-0.14472	0.01230	-11.76	<.0001
hispmale		1	-0.05890	0.00816	-7.22	<.0001
hispfemale		1	-0.12688	0.01444	-8.79	<.0001
othermale		1	-0.00480	0.01452	-0.33	0.7409
otherfemale		1	-0.27805	0.02791	-9.96	<.0001
agedummy		1	0.00904	0.00578	1.56	0.1178
educ		1	-0.01332	0.00618	-2.16	0.0311
citizen		1	0.05358	0.00764	7.01	<.0001

Multivariate Analysis - Within Range
PROTECT

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read 44114
Number of Observations Used 44114

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	208790	10440	12580.7	<.0001
Error	44093	36589	0.82980		
Corrected Total	44113	245379			

Root MSE	0.91094	R-Square	0.8509
Dependent Mean	2.94657	Adj R-Sq	0.8508
Coeff Var	30.91511		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.87057	0.02366	36.79	<.0001	0
logmin	1	0.70728	0.00194	364.14	<.0001	0.83940
drugtraff	1	0.02905	0.01440	2.02	0.0437	0.00591
sexual2	1	0.12545	0.05054	2.48	0.0131	0.00474
porn	1	0.13632	0.04036	3.38	0.0007	0.00654
immigration	1	0.18208	0.01825	9.98	<.0001	0.03118
othtype	1	-0.30267	0.02503	-12.09	<.0001	-0.02488
whitecoll	1	-0.32812	0.01644	-19.96	<.0001	-0.05572
mandmin2	1	0.21425	0.01484	14.43	<.0001	0.03142
newcnvtn	1	0.24305	0.01886	12.89	<.0001	0.02427
custody	1	0.42003	0.01157	36.30	<.0001	0.08134
whitefemale	1	-0.17298	0.02187	-7.91	<.0001	-0.01586
blackmale	1	0.03482	0.01307	2.66	0.0077	0.00612
blackfemale	1	-0.35208	0.02442	-14.42	<.0001	-0.02860
hispmale	1	-0.08482	0.01458	-5.82	<.0001	-0.01730
hispfemale	1	-0.14631	0.02585	-5.66	<.0001	-0.01129
othermale	1	-0.04132	0.02555	-1.62	0.1059	-0.00319
otherfemale	1	-0.23261	0.05120	-4.54	<.0001	-0.00849
agedummy	1	0.00558	0.01060	0.53	0.5985	0.00099226
educ	1	0.00157	0.01157	0.14	0.8920	0.00026975
citizen	1	-0.06203	0.01404	-4.42	<.0001	-0.01242

Multivariate Analysis - Within Range
Booker

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read 104567
Number of Observations Used 104567

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	473643	23682	30501.3	<.0001
Error	104546	81173	0.77643		
Corrected Total	104566	554816			

Root MSE	0.88115	R-Square	0.8537
Dependent Mean	3.05700	Adj R-Sq	0.8537
Coeff Var	28.82410		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.87122	0.01527	57.07	<.0001	0
logmin	1	0.71198	0.00126	567.20	<.0001	0.84324
drugtraff	1	0.01067	0.00907	1.18	0.2397	0.00221
sexual2	1	0.07673	0.03037	2.53	0.0115	0.00311
porn	1	0.16805	0.02133	7.88	<.0001	0.01023
immigration	1	0.11648	0.01125	10.36	<.0001	0.02098
othtype	1	-0.35665	0.01590	-22.44	<.0001	-0.02994
whitecoll	1	-0.30489	0.01062	-28.71	<.0001	-0.05107
mandmin2	1	0.19866	0.00878	22.63	<.0001	0.03197
newcnvtn	1	0.25090	0.01185	21.18	<.0001	0.02563
custody	1	0.42423	0.00762	55.69	<.0001	0.08014
whitefemale	1	-0.18859	0.01425	-13.24	<.0001	-0.01716
blackmale	1	0.06361	0.00836	7.61	<.0001	0.01163
blackfemale	1	-0.27533	0.01622	-16.98	<.0001	-0.02173
hispmale	1	-0.08625	0.00940	-9.18	<.0001	-0.01814
hispfemale	1	-0.12859	0.01582	-8.13	<.0001	-0.01056
othermale	1	-0.04550	0.01615	-2.82	0.0049	-0.00357
otherfemale	1	-0.28748	0.03199	-8.99	<.0001	-0.01082
agedummy	1	0.01476	0.00687	2.15	0.0317	0.00260
educ	1	-0.00660	0.00744	-0.89	0.3753	-0.00114
citizen	1	-0.10193	0.00877	-11.62	<.0001	-0.02097

Multivariate Analysis - Within Range
Gall

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read 138348
Number of Observations Used 138348

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	572246	28612	30987.2	<.0001
Error	138327	127726	0.92336		
Corrected Total	138347	699972			

Root MSE	0.96092	R-Square	0.8175
Dependent Mean	2.87096	Adj R-Sq	0.8175
Coeff Var	33.47021		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	1.03567	0.01541	67.19	<.0001	0
logmin	1	0.61607	0.00108	567.89	<.0001	0.81178
drugtraff	1	-0.05584	0.00921	-6.06	<.0001	-0.01149
sexual2	1	0.08755	0.03101	2.82	0.0048	0.00337
porn	1	0.23002	0.02057	11.18	<.0001	0.01452
immigration	1	0.09197	0.01096	8.39	<.0001	0.01903
othtype	1	-0.63613	0.01582	-40.22	<.0001	-0.05261
whitecoll	1	-0.46958	0.01079	-43.52	<.0001	-0.07553
mandmin2	1	0.34621	0.00861	40.19	<.0001	0.05575
NEWCNVTN	1	0.35024	0.01308	26.78	<.0001	0.03146
custody	1	0.58442	0.00788	74.18	<.0001	0.10401
whitefemale	1	-0.31919	0.01471	-21.70	<.0001	-0.02754
blackmale	1	0.11497	0.00863	13.32	<.0001	0.02048
blackfemale	1	-0.37900	0.01740	-21.78	<.0001	-0.02712
hispmale	1	-0.04259	0.00909	-4.68	<.0001	-0.00945
hispfemale	1	-0.05632	0.01478	-3.81	0.0001	-0.00493
othermale	1	-0.04299	0.01688	-2.55	0.0109	-0.00313
otherfemale	1	-0.51468	0.03392	-15.17	<.0001	-0.01772
agedummy	1	-0.00439	0.00665	-0.66	0.5091	-0.00077525
educ	1	0.00738	0.00753	0.98	0.3272	0.00124
citizen	1	-0.07253	0.00864	-8.39	<.0001	-0.01599

Multivariate Analysis - Substantial Assistance
Koon

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	42335
Number of Observations Used	42015
Number of Observations with Missing Values	320

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	151653	7582.63954	1928.01	<.0001
Error	41994	165157	3.93288		
Corrected Total	42014	316810			

Root MSE	1.98315	R-Square	0.4787
Dependent Mean	2.53844	Adj R-Sq	0.4784
Coeff Var	78.12486		

Parameter Estimates

Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	Intercept	1	-2.10967	0.05586	-37.76	<.0001
logmin		1	1.05451	0.01059	99.61	<.0001
drugtraff		1	0.15578	0.03644	4.28	<.0001
sexual2		1	0.18894	0.26103	0.72	0.4692
porn		1	0.56052	0.19535	2.87	0.0041
immigration		1	-0.03995	0.06898	-0.58	0.5625
othtype		1	-0.88104	0.06287	-14.01	<.0001
whitecoll		1	-0.41273	0.04407	-9.37	<.0001
mandmin2		1	0.12357	0.02590	4.77	<.0001
NEWCNVTN	Plea or trial indicator	1	0.21671	0.17508	1.24	0.2158
custody		1	0.95968	0.02282	42.06	<.0001
whitefemale		1	-0.37831	0.03988	-9.49	<.0001
blackmale		1	0.17525	0.02634	6.65	<.0001
blackfemale		1	-0.34288	0.04654	-7.37	<.0001
hispmale		1	0.02113	0.03185	0.66	0.5072
hispfemale		1	-0.53991	0.05426	-9.95	<.0001
othermale		1	-0.06528	0.06020	-1.08	0.2782
otherfemale		1	-0.49344	0.11811	-4.18	<.0001
agedummy		1	0.00927	0.02396	0.39	0.6988
educ		1	-0.20051	0.02324	-8.63	<.0001
citizen		1	0.04899	0.03160	1.55	0.1210

Multivariate Analysis - Substantial Assistance
PROTECT

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read 10872
Number of Observations Used 10872

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	43955	2197.75396	572.04	<.0001
Error	10851	41689	3.84197		
Corrected Total	10871	85644			

Root MSE	1.96009	R-Square	0.5132
Dependent Mean	2.57596	Adj R-Sq	0.5123
Coeff Var	76.09168		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	-2.62222	0.12070	-21.72	<.0001	0
logmin	1	1.16425	0.01993	58.43	<.0001	0.53293
drugtraff	1	0.20937	0.06537	3.20	0.0014	0.03588
sexual2	1	0.10865	0.36034	0.30	0.7630	0.00206
porn	1	0.85467	0.44360	1.93	0.0540	0.01305
immigration	1	0.21485	0.12334	1.74	0.0816	0.01375
othtype	1	-0.44325	0.11573	-3.83	0.0001	-0.03005
whitecoll	1	-0.36065	0.07804	-4.62	<.0001	-0.04896
mandmin2	1	0.05640	0.05064	1.11	0.2654	0.00911
newcnvtn	1	0.40019	0.30339	1.32	0.1872	0.00884
custody	1	1.04271	0.04468	23.34	<.0001	0.18390
whitefemale	1	-0.43923	0.07599	-5.78	<.0001	-0.04165
blackmale	1	-0.00504	0.05181	-0.10	0.9226	-0.00077146
blackfemale	1	-0.59997	0.08899	-6.74	<.0001	-0.04772
hispmale	1	0.09534	0.05912	1.61	0.1068	0.01396
hispfemale	1	-0.44473	0.10363	-4.29	<.0001	-0.03029
othermale	1	-0.25746	0.11684	-2.20	0.0276	-0.01527
otherfemale	1	-1.34720	0.18870	-7.14	<.0001	-0.04889
agedummy	1	-0.09063	0.04733	-1.91	0.0555	-0.01313
educ	1	-0.11137	0.04516	-2.47	0.0137	-0.01751
citizen	1	0.08023	0.05996	1.34	0.1809	0.01063

Multivariate Analysis - Substantial Assistance
Booker

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read 27867
Number of Observations Used 27867

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	92676	4633.78517	1368.30	<.0001
Error	27846	94301	3.38652		
Corrected Total	27866	186977			

Root MSE	1.84025	R-Square	0.4957
Dependent Mean	2.82271	Adj R-Sq	0.4953
Coeff Var	65.19445		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	-3.67512	0.08118	-45.27	<.0001	0
logmin	1	1.45853	0.01525	95.63	<.0001	0.57993
drugtraff	1	0.15048	0.03943	3.82	0.0001	0.02769
sexual2	1	0.38947	0.23769	1.64	0.1013	0.00708
porn	1	0.49404	0.17500	2.82	0.0048	0.01233
immigration	1	0.18186	0.07252	2.51	0.0122	0.01297
othtype	1	-0.41213	0.06961	-5.92	<.0001	-0.02985
whitecoll	1	-0.18703	0.04748	-3.94	<.0001	-0.02699
mandmin2	1	-0.14257	0.02910	-4.90	<.0001	-0.02582
newcnvtn	1	-0.09899	0.22550	-0.44	0.6607	-0.00187
custody	1	0.87834	0.02655	33.08	<.0001	0.16572
whitefemale	1	-0.22966	0.04548	-5.05	<.0001	-0.02321
blackmale	1	0.00569	0.03023	0.19	0.8506	0.00097425
blackfemale	1	-0.32450	0.05564	-5.83	<.0001	-0.02620
hispmale	1	0.08253	0.03526	2.34	0.0193	0.01316
hispfemale	1	-0.34326	0.06189	-5.55	<.0001	-0.02500
othermale	1	0.21822	0.05985	3.65	0.0003	0.01635
otherfemale	1	-0.06645	0.10958	-0.61	0.5442	-0.00263
agedummy	1	-0.08823	0.02940	-3.00	0.0027	-0.01305
educ	1	-0.15134	0.02673	-5.66	<.0001	-0.02575
citizen	1	0.01891	0.03480	0.54	0.5870	0.00276

Multivariate Analysis - Substantial Assistance
Gall

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read 34985
Number of Observations Used 34985

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	119227	5961.37265	1428.99	<.0001
Error	34964	145861	4.17175		
Corrected Total	34984	265088			

Root MSE	2.04249	R-Square	0.4498
Dependent Mean	2.71135	Adj R-Sq	0.4494
Coeff Var	75.33105		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	-3.92978	0.08258	-47.59	<.0001	0
logmin	1	1.48816	0.01521	97.87	<.0001	0.54122
drugtraff	1	0.10048	0.03935	2.55	0.0107	0.01756
sexual2	1	0.37755	0.18419	2.05	0.0404	0.00831
porn	1	0.42862	0.15255	2.81	0.0050	0.01162
immigration	1	0.38478	0.07430	5.18	<.0001	0.02483
othtype	1	-0.56436	0.07049	-8.01	<.0001	-0.03794
whitecoll	1	-0.07570	0.04673	-1.62	0.1053	-0.01064
mandmin2	1	-0.06094	0.02872	-2.12	0.0339	-0.01048
NEWCNVTN	1	0.07386	0.28101	0.26	0.7927	0.00104
custody	1	1.01330	0.02633	38.49	<.0001	0.17891
whitefemale	1	-0.32051	0.04365	-7.34	<.0001	-0.03168
blackmale	1	0.02274	0.03039	0.75	0.4544	0.00364
blackfemale	1	-0.37999	0.05707	-6.66	<.0001	-0.02784
hispmale	1	-0.04483	0.03453	-1.30	0.1942	-0.00677
hispfemale	1	-0.43982	0.05796	-7.59	<.0001	-0.03204
othermale	1	-0.07602	0.06125	-1.24	0.2145	-0.00518
otherfemale	1	-0.30700	0.11117	-2.76	0.0058	-0.01113
agedummy	1	-0.12606	0.03063	-4.12	<.0001	-0.01673
educ	1	-0.15489	0.02630	-5.89	<.0001	-0.02518
citizen	1	-0.04211	0.03429	-1.23	0.2195	-0.00581

Multivariate Analysis - Other Government Sponsored Below Range
PROTECT

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	3334
Number of Observations Used	3334

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	4297.37331	214.86867	193.98	<.0001
Error	3313	3669.82396	1.10770		
Corrected Total	3333	7967.19727			

Root MSE	1.05248	R-Square	0.5394
Dependent Mean	2.80767	Adj R-Sq	0.5366
Coeff Var	37.48567		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	-1.24568	0.15294	-8.14	<.0001	0
logmin	1	0.96372	0.02075	46.44	<.0001	0.61411
drugtraff	1	0.13690	0.10112	1.35	0.1759	0.04000
sexual2	1	0.34634	0.27870	1.24	0.2141	0.01687
porn	1	-0.21766	0.38646	-0.56	0.5733	-0.00689
immigration	1	0.18296	0.10230	1.79	0.0738	0.05770
othtype	1	-0.82666	0.18922	-4.37	<.0001	-0.06034
whitecoll	1	-0.42806	0.13436	-3.19	0.0015	-0.05516
mandmin2	1	0.15482	0.10641	1.45	0.1458	0.01946
newcnvtn	1	0.06124	0.35729	0.17	0.8639	0.00206
custody	1	0.78389	0.06296	12.45	<.0001	0.17771
whitefemale	1	-0.66909	0.15216	-4.40	<.0001	-0.05513
blackmale	1	0.07053	0.10308	0.68	0.4939	0.00958
blackfemale	1	-0.07306	0.30894	-0.24	0.8131	-0.00283
hispmale	1	0.07865	0.07086	1.11	0.2671	0.02267
hispfemale	1	-0.31825	0.09657	-3.30	0.0010	-0.04900
othermale	1	-0.03183	0.15821	-0.20	0.8406	-0.00276
otherfemale	1	-1.03027	0.28692	-3.59	0.0003	-0.04310
agedummy	1	0.06412	0.04355	1.47	0.1411	0.01789
educ	1	0.06178	0.06469	0.96	0.3396	0.01222
citizen	1	-0.13068	0.05941	-2.20	0.0279	-0.03875

Multivariate Analysis - Other Government Sponsored Below Range
Booker

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	5884
Number of Observations Used	5884

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	18028	901.37598	357.76	<.0001
Error	5863	14772	2.51952		
Corrected Total	5883	32799			

Root MSE	1.58730	R-Square	0.5496
Dependent Mean	2.73324	Adj R-Sq	0.5481
Coeff Var	58.07391		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	-3.16117	0.14774	-21.40	<.0001	0
logmin	1	1.41942	0.02744	51.73	<.0001	0.65533
drugtraff	1	0.26196	0.07317	3.58	0.0003	0.05304
sexual2	1	0.05786	0.18943	0.31	0.7600	0.00287
porn	1	0.45752	0.15710	2.91	0.0036	0.02859
immigration	1	0.61999	0.08621	7.19	<.0001	0.11892
othtype	1	-0.50594	0.11200	-4.52	<.0001	-0.04684
whitecoll	1	-0.24809	0.08908	-2.78	0.0054	-0.03550
mandmin2	1	-0.13141	0.07312	-1.80	0.0724	-0.01975
newcnvtn	1	0.31973	0.19198	1.67	0.0959	0.01479
custody	1	0.83538	0.05858	14.26	<.0001	0.15444
whitefemale	1	-0.39042	0.11561	-3.38	0.0007	-0.03198
blackmale	1	0.20511	0.07249	2.83	0.0047	0.03166
blackfemale	1	0.13088	0.16609	0.79	0.4307	0.00717
hispmale	1	0.26121	0.07143	3.66	0.0003	0.05510
hispfemale	1	0.18378	0.10428	1.76	0.0781	0.01786
othermale	1	-0.04440	0.11175	-0.40	0.6911	-0.00388
otherfemale	1	-0.62271	0.20894	-2.98	0.0029	-0.02671
agedummy	1	-0.16450	0.05319	-3.09	0.0020	-0.02788
educ	1	-0.01161	0.05861	-0.20	0.8430	-0.00194
citizen	1	-0.26027	0.06186	-4.21	<.0001	-0.05426

Multivariate Analysis - Other Government Sponsored Below Range
Gall

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	11515
Number of Observations Used	11042
Number of Observations with Missing Values	473

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	41509	2075.44159	657.31	<.0001
Error	11021	34799	3.15748		
Corrected Total	11041	76307			

Root MSE	1.77693	R-Square	0.5440
Dependent Mean	2.64315	Adj R-Sq	0.5431
Coeff Var	67.22770		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	-3.80318	0.11803	-32.22	<.0001	0
logmin	1	1.52466	0.02208	69.06	<.0001	0.65022
drugtraff	1	0.10022	0.05697	1.76	0.0786	0.01798
sexual2	1	-0.04129	0.14886	-0.28	0.7815	-0.00190
porn	1	0.29821	0.08973	3.32	0.0009	0.02753
immigration	1	0.70736	0.07038	10.05	<.0001	0.11283
othtype	1	-0.65547	0.09362	-7.00	<.0001	-0.05204
whitecoll	1	0.01372	0.06815	0.20	0.8405	0.00189
mandmin2	1	0.03356	0.05509	0.61	0.5425	0.00488
NEWCNVTN	1	0.16316	0.16583	0.98	0.3252	0.00638
custody	1	1.03299	0.04721	21.88	<.0001	0.17602
whitefemale	1	-0.53530	0.08504	-6.29	<.0001	-0.04418
blackmale	1	0.08867	0.05626	1.58	0.1150	0.01260
blackfemale	1	-0.65689	0.12308	-5.34	<.0001	-0.03576
hispmale	1	0.21153	0.05530	3.83	0.0001	0.03920
hispfemale	1	-0.10314	0.09378	-1.10	0.2714	-0.00775
othermale	1	0.13483	0.08548	1.58	0.1147	0.01118
otherfemale	1	0.02963	0.16293	0.18	0.8557	0.00120
agedummy	1	-0.20473	0.04655	-4.40	<.0001	-0.02897
educ	1	-0.06309	0.04577	-1.38	0.1681	-0.01011
citizen	1	-0.21321	0.05283	-4.04	<.0001	-0.03867

Multivariate Analysis - Non-Government Sponsored Below Range
PROTECT

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	3715
Number of Observations Used	3715

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	10263	513.14534	165.11	<.0001
Error	3694	11481	3.10794		
Corrected Total	3714	21744			

Root MSE	1.76293	R-Square	0.4720
Dependent Mean	2.46872	Adj R-Sq	0.4691
Coeff Var	71.41077		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	-2.58295	0.19122	-13.51	<.0001	0
logmin	1	1.28228	0.03813	33.63	<.0001	0.55631
drugtraff	1	0.07482	0.09808	0.76	0.4456	0.01450
sexual2	1	0.05372	0.38859	0.14	0.8901	0.00170
porn	1	-0.27259	0.21629	-1.26	0.2076	-0.01636
immigration	1	0.35049	0.11897	2.95	0.0032	0.06040
othtype	1	-0.47386	0.16301	-2.91	0.0037	-0.03892
whitecoll	1	-0.08991	0.10905	-0.82	0.4097	-0.01496
mandmin2	1	0.12400	0.11906	1.04	0.2977	0.01582
newcnvtn	1	0.04835	0.13090	0.37	0.7119	0.00460
custody	1	0.86452	0.07726	11.19	<.0001	0.17419
whitefemale	1	-0.23178	0.12454	-1.86	0.0628	-0.02466
blackmale	1	-0.10493	0.09391	-1.12	0.2639	-0.01631
blackfemale	1	-0.31703	0.15037	-2.11	0.0351	-0.02707
hispmale	1	-0.02369	0.09858	-0.24	0.8101	-0.00463
hispfemale	1	-0.27080	0.14751	-1.84	0.0665	-0.02460
othermale	1	-0.19156	0.16316	-1.17	0.2404	-0.01503
otherfemale	1	-0.56857	0.28138	-2.02	0.0434	-0.02455
agedummy	1	0.02579	0.07531	0.34	0.7321	0.00422
educ	1	-0.01735	0.07441	-0.23	0.8156	-0.00310
citizen	1	0.02525	0.09196	0.27	0.7837	0.00496

Multivariate Analysis - Non-Government Sponsored Below Range
Booker

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	22906
Number of Observations Used	22906

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	84044	4202.22206	1426.47	<.0001
Error	22885	67417	2.94589		
Corrected Total	22905	151461			

Root MSE	1.71636	R-Square	0.5549
Dependent Mean	2.63317	Adj R-Sq	0.5545
Coeff Var	65.18233		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	-3.44388	0.07612	-45.24	<.0001	0
logmin	1	1.64009	0.01497	109.58	<.0001	0.70569
drugtraff	1	0.01412	0.03731	0.38	0.7052	0.00263
sexual2	1	0.16162	0.14801	1.09	0.2749	0.00493
porn	1	0.13844	0.07190	1.93	0.0542	0.00975
immigration	1	0.22041	0.04971	4.43	<.0001	0.03135
othtype	1	-0.06104	0.06182	-0.99	0.3235	-0.00494
whitecoll	1	-0.06913	0.04116	-1.68	0.0930	-0.01126
mandmin2	1	-0.25412	0.03939	-6.45	<.0001	-0.03529
newcnvtn	1	-0.13622	0.04381	-3.11	0.0019	-0.01455
custody	1	0.44215	0.02943	15.03	<.0001	0.08468
whitefemale	1	-0.04887	0.04971	-0.98	0.3256	-0.00473
blackmale	1	0.11620	0.03396	3.42	0.0006	0.01867
blackfemale	1	-0.14887	0.06021	-2.47	0.0134	-0.01157
hispmale	1	0.08288	0.03888	2.13	0.0330	0.01449
hispfemale	1	-0.27420	0.06075	-4.51	<.0001	-0.02170
othermale	1	0.02454	0.06182	0.40	0.6913	0.00185
otherfemale	1	-0.31089	0.11342	-2.74	0.0061	-0.01228
agedummy	1	-0.10852	0.03067	-3.54	0.0004	-0.01604
educ	1	0.03282	0.02795	1.17	0.2404	0.00570
citizen	1	-0.18917	0.03743	-5.05	<.0001	-0.03267

Multivariate Analysis - Non-Government Sponsored Below Range
Gall

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	46925
Number of Observations Used	46925

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	20	167680	8384.01610	2555.43	<.0001
Error	46904	153885	3.28086		
Corrected Total	46924	321566			

Root MSE	1.81131	R-Square	0.5214
Dependent Mean	2.56758	Adj R-Sq	0.5212
Coeff Var	70.54546		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	-3.79025	0.05772	-65.67	<.0001	0
logmin	1	1.67385	0.01100	152.15	<.0001	0.67674
drugtraff	1	-0.03731	0.02780	-1.34	0.1796	-0.00677
sexual2	1	-0.12410	0.11258	-1.10	0.2703	-0.00361
porn	1	-0.03708	0.04551	-0.81	0.4151	-0.00332
immigration	1	0.26532	0.03672	7.23	<.0001	0.03982
othtype	1	-0.21151	0.04744	-4.46	<.0001	-0.01633
whitecoll	1	0.04816	0.03181	1.51	0.1300	0.00742
mandmin2	1	-0.03469	0.02850	-1.22	0.2235	-0.00474
NEWCNVTN	1	-0.14297	0.03597	-3.97	<.0001	-0.01335
custody	1	0.62541	0.02174	28.77	<.0001	0.11528
whitefemale	1	-0.23980	0.03769	-6.36	<.0001	-0.02235
blackmale	1	0.05201	0.02609	1.99	0.0462	0.00796
blackfemale	1	-0.25000	0.04639	-5.39	<.0001	-0.01833
hispmale	1	0.08937	0.02770	3.23	0.0013	0.01590
hispfemale	1	-0.14170	0.04415	-3.21	0.0013	-0.01124
othermale	1	0.07455	0.04694	1.59	0.1123	0.00538
otherfemale	1	-0.26599	0.08763	-3.04	0.0024	-0.00986
agedummy	1	-0.08777	0.02286	-3.84	0.0001	-0.01262
educ	1	0.03377	0.02095	1.61	0.1070	0.00571
citizen	1	-0.29027	0.02778	-10.45	<.0001	-0.05103

Odds of Obtaining a Non-Government Sponsored Below Range Departure/Variance
PROTECT

The LOGISTIC Procedure

Model Information

Data Set	WORK.PROTECTLOGIT
Response Variable	downcourt
Number of Response Levels	2
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	47745
Number of Observations Used	47745

Response Profile

Ordered Value	downcourt	Total Frequency
1	1	3691
2	0	44054

Probability modeled is downcourt=1.

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	25988.760	25617.643
SC	25997.534	25801.889
-2 Log L	25986.760	25575.643

Odds of Obtaining a Non-Government Sponsored Below Range Departure/Variance
PROTECT

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	411.1173	20	<.0001
Score	416.1726	20	<.0001
Wald	408.5013	20	<.0001

Odds of Obtaining a Non-Government Sponsored Below Range Departure/Variance
PROTECT

Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-2.2749	0.0676	1133.1720	<.0001
glmin	1	0.00278	0.000310	80.6535	<.0001
drugtraff	1	-0.1242	0.0569	4.7686	0.0290
sexual2	1	-0.5258	0.2271	5.3601	0.0206
porn	1	0.1863	0.1308	2.0292	0.1543
immigration	1	0.1340	0.0706	3.6040	0.0576
othtype	1	-0.1481	0.0973	2.3165	0.1280
whitecoll	1	-0.3155	0.0639	24.3408	<.0001
mandmin2	1	-0.4008	0.0692	33.5708	<.0001
newcnvtn	1	-0.1827	0.0810	5.0800	0.0242
custody	1	-0.5338	0.0442	145.8310	<.0001
whitefemale	1	0.3156	0.0752	17.6057	<.0001
blackmale	1	-0.2878	0.0549	27.4282	<.0001
blackfemale	1	0.1157	0.0901	1.6495	0.1990
hispmale	1	-0.1574	0.0586	7.2220	0.0072
hispfemale	1	0.3193	0.0887	12.9694	0.0003
othermale	1	0.0377	0.0970	0.1511	0.6975
otherfemale	1	0.2973	0.1705	3.0413	0.0812
agedummy	1	0.1323	0.0443	8.9158	0.0028
educ	1	0.1665	0.0437	14.5173	0.0001
newcit	1	0.1880	0.0553	11.5683	0.0007

The LOGISTIC Procedure

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits	
glmin	1.003	1.002	1.003
drugtraff	0.883	0.790	0.987
sexual2	0.591	0.379	0.922
porn	1.205	0.932	1.557
immigration	1.143	0.996	1.313
othtype	0.862	0.713	1.044
whitecoll	0.729	0.644	0.827
mandmin2	0.670	0.585	0.767
newcnvtn	0.833	0.711	0.976
custody	0.586	0.538	0.639
whitefemale	1.371	1.183	1.589
blackmale	0.750	0.673	0.835
blackfemale	1.123	0.941	1.340
hispmale	0.854	0.762	0.958
hispfemale	1.376	1.157	1.637
othermale	1.038	0.859	1.256
otherfemale	1.346	0.964	1.880
agedummy	1.141	1.046	1.245
educ	1.181	1.084	1.287
newcit	1.207	1.083	1.345

Association of Predicted Probabilities and Observed Responses

Percent Concordant	59.1	Somers' D	0.206
Percent Discordant	38.5	Gamma	0.210
Percent Tied	2.3	Tau-a	0.029
Pairs	162603314	c	0.603

Odds of Obtaining a Non-Government Sponsored Below Range Departure/Variance Booker

The LOGISTIC Procedure

Model Information

Data Set	WORK.BOOKERLOGIT
Response Variable	downcourt
Number of Response Levels	2
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	127064
Number of Observations Used	127064

Response Profile

Ordered Value	downcourt	Total Frequency
1	1	22497
2	0	104567

Probability modeled is downcourt=1.

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	118652.97	114582.00
SC	118662.72	114786.80
-2 Log L	118650.97	114540.00

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	4110.9689	20	<.0001
Score	4299.8723	20	<.0001
Wald	4087.5179	20	<.0001

Odds of Obtaining a Non-Government Sponsored Below Range Departure/Variance
Booker

Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-1.2262	0.0301	1659.9601	<.0001
glmin	1	0.00411	0.000120	1162.9160	<.0001
drugtraff	1	0.0853	0.0245	12.1370	0.0005
sexual2	1	-0.4890	0.0948	26.6284	<.0001
porn	1	0.2042	0.0493	17.1169	<.0001
immigration	1	0.0215	0.0319	0.4551	0.4999
othtype	1	-0.0155	0.0413	0.1398	0.7085
whitecoll	1	-0.0679	0.0275	6.0996	0.0135
mandmin2	1	-0.4144	0.0258	258.2460	<.0001
newcnvtn	1	-0.00250	0.0314	0.0063	0.9366
custody	1	-0.8042	0.0193	1743.8498	<.0001
whitefemale	1	0.0852	0.0341	6.2544	0.0124
blackmale	1	-0.2340	0.0225	108.5280	<.0001
blackfemale	1	-0.1009	0.0407	6.1527	0.0131
hispmale	1	-0.2911	0.0257	128.0104	<.0001
hispfemale	1	0.0299	0.0405	0.5451	0.4603
othermale	1	-0.0124	0.0414	0.0902	0.7640
otherfemale	1	0.0384	0.0767	0.2504	0.6168
agedummy	1	0.0721	0.0199	13.1619	0.0003
educ	1	0.1997	0.0188	113.3655	<.0001
newcit	1	0.1675	0.0245	46.8501	<.0001

Odds Ratio Estimates

The LOGISTIC Procedure

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits	
glmin	1.004	1.004	1.004
drugtraff	1.089	1.038	1.143
sexual2	0.613	0.509	0.738
porn	1.226	1.113	1.351
immigration	1.022	0.960	1.088
othtype	0.985	0.908	1.068
whitecoll	0.934	0.885	0.986
mandmin2	0.661	0.628	0.695
newcnvtn	0.998	0.938	1.061
custody	0.447	0.431	0.465
whitefemale	1.089	1.019	1.164
blackmale	0.791	0.757	0.827
blackfemale	0.904	0.835	0.979
hispmale	0.747	0.711	0.786
hispfemale	1.030	0.952	1.115
othermale	0.988	0.911	1.071
otherfemale	1.039	0.894	1.208
agedummy	1.075	1.034	1.117
educ	1.221	1.177	1.267
newcit	1.182	1.127	1.240

Association of Predicted Probabilities and Observed Responses

Percent Concordant	63.5	Somers' D	0.281
Percent Discordant	35.4	Gamma	0.284
Percent Tied	1.0	Tau-a	0.082

Pairs 2352443799 c 0.640

Odds of Obtaining a Non-Government Sponsored Below Range Departure/Variance Gall

The LOGISTIC Procedure

Model Information

Data Set	WORK.GALLLOGIT
Response Variable	downcourt
Number of Response Levels	2
Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	184846
Number of Observations Used	184846

Response Profile

Ordered Value	downcourt	Total Frequency
1	1	46498
2	0	138348

Probability modeled is downcourt=1.

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	208519.94	197281.86
SC	208530.07	197494.53
-2 Log L	208517.94	197239.86

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	11278.0875	20	<.0001
Score	11732.2371	20	<.0001
Wald	10767.0833	20	<.0001

Odds of Obtaining a Non-Government Sponsored Below Range Departure/Variance
Gall

Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-0.7065	0.0238	881.1556	<.0001
GLMIN	1	0.00479	0.000097	2418.6651	<.0001
drugtraff	1	0.2754	0.0188	215.1592	<.0001
sexual2	1	-0.4130	0.0721	32.7753	<.0001
porn	1	0.7504	0.0341	485.6171	<.0001
immigration	1	-0.0301	0.0238	1.5940	0.2068
othtype	1	0.0239	0.0318	0.5653	0.4521
whitecoll	1	-0.0119	0.0216	0.3026	0.5822
mandmin2	1	-0.6116	0.0194	992.3544	<.0001
NEWCNVTN	1	-0.0697	0.0265	6.9008	0.0086
custody	1	-0.7989	0.0148	2896.1847	<.0001
whitefemale	1	0.1089	0.0265	16.8569	<.0001
blackmale	1	-0.2899	0.0175	273.8344	<.0001
blackfemale	1	-0.0334	0.0322	1.0775	0.2993
hispmale	1	-0.3800	0.0187	411.1766	<.0001
hispfemale	1	-0.0442	0.0296	2.2307	0.1353
othermale	1	0.0225	0.0323	0.4870	0.4853
otherfemale	1	0.1182	0.0612	3.7283	0.0535
agedummy	1	0.0229	0.0148	2.3917	0.1220
educ	1	0.2129	0.0144	217.2191	<.0001
NEWCIT	1	0.1063	0.0184	33.2790	<.0001

Odds Ratio Estimates

The LOGISTIC Procedure

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits	
GLMIN	1.005	1.005	1.005
drugtraff	1.317	1.269	1.366
sexual2	0.662	0.574	0.762
porn	2.118	1.981	2.264
immigration	0.970	0.926	1.017
othtype	1.024	0.962	1.090
whitecoll	0.988	0.947	1.031
mandmin2	0.542	0.522	0.564
NEWCNVTN	0.933	0.885	0.982
custody	0.450	0.437	0.463
whitefemale	1.115	1.059	1.175
blackmale	0.748	0.723	0.774
blackfemale	0.967	0.908	1.030
hispmale	0.684	0.659	0.709
hispfemale	0.957	0.903	1.014
othermale	1.023	0.960	1.090
otherfemale	1.126	0.998	1.269
agedummy	1.023	0.994	1.053
educ	1.237	1.203	1.273
NEWCIT	1.112	1.073	1.153

Association of Predicted Probabilities and Observed Responses

Percent Concordant	66.5	Somers' D	0.337
Percent Discordant	32.8	Gamma	0.339
Percent Tied	0.7	Tau-a	0.127

Pairs 6432905304 c 0.668

Multivariate Analysis - Drug Trafficking
Koon

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	91820
Number of Observations Used	91334
Number of Observations with Missing Values	486

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	21	139340	6635.25850	5998.52	<.0001
Error	91312	101005	1.10615		
Corrected Total	91333	240345			

Root MSE	1.05174	R-Square	0.5798
Dependent Mean	3.64693	Adj R-Sq	0.5797
Coeff Var	28.83895		

Parameter Estimates

Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	Intercept	1	0.11037	0.02022	5.46	<.0001
logmin		1	0.88504	0.00430	206.04	<.0001
crack		1	0.03312	0.01197	2.77	0.0057
heroin		1	-0.05422	0.01474	-3.68	0.0002
meth		1	0.10679	0.01244	8.59	<.0001
marij		1	-0.13129	0.01040	-12.62	<.0001
upward		1	0.55700	0.04717	11.81	<.0001
downdep		1	-0.80006	0.01030	-77.71	<.0001
subasst		1	-1.02763	0.00848	-121.16	<.0001
mandmin2		1	0.17556	0.00906	19.37	<.0001
NEWCNVTN	Plea or trial indicator	1	0.01153	0.01818	0.63	0.5260
custody		1	0.39776	0.00866	45.95	<.0001
whitefemale		1	-0.31435	0.01858	-16.92	<.0001
blackmale		1	0.08773	0.01295	6.78	<.0001
blackfemale		1	-0.22820	0.02193	-10.40	<.0001
hispmale		1	0.02666	0.01150	2.32	0.0205
hispfemale		1	-0.23427	0.01800	-13.01	<.0001
othermale		1	0.01151	0.02977	0.39	0.6991
otherfemale		1	-0.22103	0.05691	-3.88	0.0001
agedummy		1	0.04687	0.00805	5.82	<.0001
educ		1	-0.08946	0.00974	-9.19	<.0001
citizen		1	0.02666	0.00978	2.73	0.0064

Multivariate Analysis - Drug Trafficking
PROTECT

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	23713
Number of Observations Used	23713

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	21	33443	1592.52553	1876.54	<.0001
Error	23691	20105	0.84865		
Corrected Total	23712	53548			

Root MSE	0.92122	R-Square	0.6245
Dependent Mean	3.85806	Adj R-Sq	0.6242
Coeff Var	23.87783		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.24868	0.03728	6.67	<.0001	0
logmin	1	0.85047	0.00659	128.99	<.0001	0.67164
crack	1	0.03464	0.02094	1.65	0.0981	0.00954
heroin	1	-0.06312	0.02551	-2.47	0.0134	-0.01090
meth	1	0.13019	0.01983	6.57	<.0001	0.03473
marij	1	-0.06958	0.01810	-3.85	0.0001	-0.02049
upward	1	0.86711	0.08677	9.99	<.0001	0.03991
downdep	1	-0.67439	0.02108	-32.00	<.0001	-0.13230
subasst	1	-0.95155	0.01447	-65.78	<.0001	-0.28084
mandmin2	1	0.16297	0.01437	11.34	<.0001	0.05279
newcnvtn	1	0.03807	0.02954	1.29	0.1974	0.00531
custody	1	0.38948	0.01542	25.26	<.0001	0.10972
whitefemale	1	-0.36603	0.03091	-11.84	<.0001	-0.05123
blackmale	1	0.03470	0.02219	1.56	0.1179	0.01009
blackfemale	1	-0.23975	0.04154	-5.77	<.0001	-0.02506
hispmale	1	0.00814	0.01911	0.43	0.6701	0.00263
hispfemale	1	-0.12702	0.03107	-4.09	<.0001	-0.01843
othermale	1	-0.04157	0.04295	-0.97	0.3332	-0.00402
otherfemale	1	-0.30439	0.08486	-3.59	0.0003	-0.01443
agedummy	1	0.00891	0.01398	0.64	0.5240	0.00260
educ	1	-0.02647	0.01660	-1.59	0.1109	-0.00647
citizen	1	0.05825	0.01655	3.52	0.0004	0.01742

Multivariate Analysis - Drug Trafficking
Booker

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read 65772
Number of Observations Used 65772

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	21	91192	4342.50000	5125.89	<.0001
Error	65750	55701	0.84717		
Corrected Total	65771	146894			

Root MSE	0.92042	R-Square	0.6208
Dependent Mean	3.89106	Adj R-Sq	0.6207
Coeff Var	23.65469		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.01010	0.02331	0.43	0.6648	0
logmin	1	0.89618	0.00419	213.84	<.0001	0.67314
crack	1	-0.03398	0.01220	-2.78	0.0054	-0.00961
heroin	1	-0.12644	0.01615	-7.83	<.0001	-0.02048
meth	1	0.07532	0.01166	6.46	<.0001	0.02046
marij	1	-0.15060	0.01092	-13.79	<.0001	-0.04377
upward	1	0.80648	0.04349	18.54	<.0001	0.04478
downdep	1	-0.57277	0.00962	-59.56	<.0001	-0.15195
subasst	1	-0.94064	0.00902	-104.27	<.0001	-0.27583
mandmin2	1	0.13335	0.00850	15.70	<.0001	0.04386
newcnvtn	1	0.04635	0.01746	2.66	0.0079	0.00660
custody	1	0.42753	0.00970	44.09	<.0001	0.11571
whitefemale	1	-0.16442	0.01890	-8.70	<.0001	-0.02287
blackmale	1	0.08749	0.01301	6.73	<.0001	0.02640
blackfemale	1	-0.27325	0.02590	-10.55	<.0001	-0.02751
hispmale	1	0.04681	0.01173	3.99	<.0001	0.01519
hispfemale	1	-0.16225	0.01919	-8.45	<.0001	-0.02278
othermale	1	0.10063	0.02479	4.06	<.0001	0.01023
otherfemale	1	-0.03997	0.04683	-0.85	0.3934	-0.00208
agedummy	1	0.05000	0.00872	5.73	<.0001	0.01411
educ	1	-0.06295	0.00998	-6.31	<.0001	-0.01547
citizen	1	0.04791	0.01009	4.75	<.0001	0.01444

Multivariate Analysis - Drug Trafficking
Gall

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read 84596
Number of Observations Used 84596

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	21	137180	6532.37447	4815.45	<.0001
Error	84574	114728	1.35655		
Corrected Total	84595	251908			

Root MSE	1.16471	R-Square	0.5446
Dependent Mean	3.71000	Adj R-Sq	0.5444
Coeff Var	31.39377		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	-0.29275	0.02565	-11.41	<.0001	0
logmin	1	0.92076	0.00465	197.96	<.0001	0.61715
crack	1	-0.05461	0.01346	-4.06	<.0001	-0.01314
heroin	1	-0.07192	0.01718	-4.19	<.0001	-0.01060
meth	1	0.14960	0.01315	11.38	<.0001	0.03344
marij	1	-0.06342	0.01205	-5.26	<.0001	-0.01637
upward	1	0.68739	0.04118	16.69	<.0001	0.03905
downdep	1	-0.69795	0.00991	-70.41	<.0001	-0.17888
subasst	1	-1.06565	0.01066	-99.95	<.0001	-0.26353
mandmin2	1	0.20194	0.00969	20.85	<.0001	0.05745
NEWCNVTN	1	0.04759	0.02192	2.17	0.0299	0.00518
custody	1	0.64399	0.01108	58.10	<.0001	0.14796
whitefemale	1	-0.25336	0.02091	-12.12	<.0001	-0.03098
blackmale	1	0.12319	0.01448	8.51	<.0001	0.03179
blackfemale	1	-0.33579	0.03011	-11.15	<.0001	-0.02791
hispmale	1	0.04195	0.01265	3.31	0.0009	0.01191
hispfemale	1	-0.18761	0.02100	-8.93	<.0001	-0.02309
othermale	1	0.11124	0.02997	3.71	0.0002	0.00899
otherfemale	1	-0.07426	0.05553	-1.34	0.1811	-0.00314
agedummy	1	0.01994	0.01000	1.99	0.0462	0.00477
educ	1	-0.08114	0.01131	-7.17	<.0001	-0.01704
citizen	1	-0.00165	0.01093	-0.15	0.8797	-0.00043966

Multivariate Analysis - Fraud
Koon

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	36563
Number of Observations Used	36134
Number of Observations with Missing Values	429

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	17	234016	13766	4377.02	<.0001
Error	36116	113584	3.14499		
Corrected Total	36133	347601			

Root MSE	1.77341	R-Square	0.6732
Dependent Mean	0.63893	Adj R-Sq	0.6731
Coeff Var	277.55764		

Parameter Estimates

Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	Intercept	1	0.34768	0.03039	11.44	<.0001
logmin		1	0.82448	0.00337	244.41	<.0001
upward		1	1.60191	0.07289	21.98	<.0001
downdep		1	-2.04272	0.03258	-62.70	<.0001
subasst		1	-2.33945	0.02784	-84.04	<.0001
mandmin2		1	0.00304	0.34205	0.01	0.9929
NEWCNVTN	Plea or trial indicator	1	0.25361	0.05277	4.81	<.0001
custody		1	0.56365	0.02320	24.29	<.0001
whitefemale		1	-0.13009	0.02890	-4.50	<.0001
blackmale		1	0.07137	0.02607	2.74	0.0062
blackfemale		1	-0.13922	0.03042	-4.58	<.0001
hispmale		1	0.11466	0.04111	2.79	0.0053
hispfemale		1	-0.29424	0.06221	-4.73	<.0001
othermale		1	-0.03382	0.05434	-0.62	0.5336
otherfemale		1	-0.37941	0.07312	-5.19	<.0001
agedummy		1	0.00748	0.02686	0.28	0.7805
educ		1	-0.02842	0.01912	-1.49	0.1373
citizen		1	0.25977	0.03458	7.51	<.0001

Multivariate Analysis - Fraud
PROTECT

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	9520
Number of Observations Used	9520

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	17	71992	4234.85017	1394.43	<.0001
Error	9502	28857	3.03699		
Corrected Total	9519	100850			

Root MSE	1.74269	R-Square	0.7139
Dependent Mean	0.54900	Adj R-Sq	0.7133
Coeff Var	317.42827		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.64194	0.08386	7.65	<.0001	0
logmin	1	0.82705	0.00602	137.30	<.0001	0.84594
upward	1	1.59361	0.14699	10.84	<.0001	0.05996
downdep	1	-1.91486	0.07432	-25.76	<.0001	-0.14614
subasst	1	-2.47295	0.05422	-45.61	<.0001	-0.26636
mandmin2	1	-1.27016	0.78086	-1.63	0.1039	-0.00894
newcnvtn	1	0.18976	0.09292	2.04	0.0412	0.01141
custody	1	0.61092	0.04197	14.56	<.0001	0.08544
whitefemale	1	-0.09631	0.05582	-1.73	0.0845	-0.01056
blackmale	1	-0.06291	0.05047	-1.25	0.2126	-0.00769
blackfemale	1	-0.26154	0.05878	-4.45	<.0001	-0.02712
hispmale	1	0.22780	0.07381	3.09	0.0020	0.01924
hispfemale	1	-0.34147	0.10563	-3.23	0.0012	-0.01850
othermale	1	-0.16339	0.10250	-1.59	0.1109	-0.00917
otherfemale	1	-0.43141	0.13939	-3.09	0.0020	-0.01735
agedummy	1	0.01095	0.05227	0.21	0.8340	0.00118
educ	1	0.05110	0.03681	1.39	0.1651	0.00782
citizen	1	-0.33401	0.06065	-5.51	<.0001	-0.03349

Multivariate Analysis - Fraud
Booker

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read 22812
Number of Observations Used 22812

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	17	161903	9523.72916	2646.64	<.0001
Error	22794	82022	3.59842		
Corrected Total	22811	243926			

Root MSE	1.89695	R-Square	0.6637
Dependent Mean	0.75458	Adj R-Sq	0.6635
Coeff Var	251.39228		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.62910	0.06396	9.84	<.0001	0
logmin	1	0.84203	0.00451	186.64	<.0001	0.82919
upward	1	1.68668	0.07306	23.09	<.0001	0.09018
downdep	1	-2.08098	0.03597	-57.85	<.0001	-0.24180
subasst	1	-2.38210	0.04047	-58.86	<.0001	-0.24637
mandmin2	1	0.18420	0.07805	2.36	0.0183	0.00928
newcnvtn	1	0.40604	0.06171	6.58	<.0001	0.02576
custody	1	0.61073	0.02931	20.83	<.0001	0.08689
whitefemale	1	-0.09471	0.03889	-2.44	0.0149	-0.01042
blackmale	1	0.06096	0.03562	1.71	0.0870	0.00743
blackfemale	1	-0.16721	0.04131	-4.05	<.0001	-0.01730
hispmale	1	0.18923	0.05229	3.62	0.0003	0.01574
hispfemale	1	-0.21327	0.07439	-2.87	0.0042	-0.01143
othermale	1	0.04100	0.07158	0.57	0.5668	0.00230
otherfemale	1	-0.23049	0.09470	-2.43	0.0149	-0.00955
agedummy	1	-0.03988	0.04037	-0.99	0.3232	-0.00388
educ	1	0.03982	0.02595	1.53	0.1248	0.00607
citizen	1	-0.35814	0.04557	-7.86	<.0001	-0.03306

Multivariate Analysis - Fraud
Gall

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	30296
Number of Observations Used	30296

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	17	208012	12236	3031.95	<.0001
Error	30278	122192	4.03568		
Corrected Total	30295	330204			

Root MSE	2.00890	R-Square	0.6299
Dependent Mean	0.97952	Adj R-Sq	0.6297
Coeff Var	205.08966		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.68176	0.05876	11.60	<.0001	0
logmin	1	0.85742	0.00440	194.99	<.0001	0.80602
upward	1	1.67638	0.06650	25.21	<.0001	0.09001
downdep	1	-2.09968	0.02992	-70.18	<.0001	-0.27707
subasst	1	-2.30755	0.03689	-62.55	<.0001	-0.24276
mandmin2	1	0.47386	0.04647	10.20	<.0001	0.03735
NEWCNVTN	1	0.48844	0.05788	8.44	<.0001	0.02998
custody	1	0.52512	0.02663	19.72	<.0001	0.07561
whitefemale	1	-0.20187	0.03605	-5.60	<.0001	-0.02204
blackmale	1	0.04095	0.03349	1.22	0.2214	0.00487
blackfemale	1	-0.20583	0.03914	-5.26	<.0001	-0.02044
hispmale	1	0.25918	0.04460	5.81	<.0001	0.02350
hispfemale	1	0.08924	0.06166	1.45	0.1478	0.00531
othermale	1	-0.09513	0.06263	-1.52	0.1288	-0.00557
otherfemale	1	-0.24219	0.08918	-2.72	0.0066	-0.00971
agedummy	1	-0.09470	0.03870	-2.45	0.0144	-0.00873
educ	1	0.08020	0.02384	3.36	0.0008	0.01214
citizen	1	-0.42253	0.03969	-10.64	<.0001	-0.04142

Multivariate Analysis - Firearms
Koon

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	15693
Number of Observations Used	15601
Number of Observations with Missing Values	92

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	38831	2588.74273	1885.45	<.0001
Error	15585	21398	1.37301		
Corrected Total	15600	60230			

Root MSE	1.17176	R-Square	0.6447
Dependent Mean	3.22585	Adj R-Sq	0.6444
Coeff Var	36.32394		

Parameter Estimates

Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	Intercept	1	0.32607	0.03179	10.26	<.0001
logmin		1	0.82184	0.00669	122.85	<.0001
upward		1	0.58676	0.07463	7.86	<.0001
downdep		1	-1.11079	0.02921	-38.03	<.0001
subasst		1	-1.45283	0.03082	-47.13	<.0001
mandmin2		1	0.29839	0.03448	8.65	<.0001
NEWCNVTN	Plea or trial indicator	1	0.12029	0.03881	3.10	0.0019
custody		1	0.47977	0.02225	21.56	<.0001
whitefemale		1	-0.64367	0.07990	-8.06	<.0001
blackmale		1	0.05804	0.02141	2.71	0.0067
blackfemale		1	-0.60075	0.07312	-8.22	<.0001
hispmale		1	0.02489	0.03548	0.70	0.4830
othermale		1	0.16688	0.06160	2.71	0.0068
agedummy		1	0.02454	0.02129	1.15	0.2490
educ		1	-0.08721	0.02779	-3.14	0.0017
citizen		1	-0.03655	0.04517	-0.81	0.4184

Multivariate Analysis - Firearms
PROTECT

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	6958
Number of Observations Used	6958

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	17960	1197.30512	1052.47	<.0001
Error	6942	7897.30162	1.13761		
Corrected Total	6957	25857			

Root MSE	1.06659	R-Square	0.6946
Dependent Mean	3.30972	Adj R-Sq	0.6939
Coeff Var	32.22600		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.20014	0.07744	2.58	0.0098	0
logmin	1	0.87333	0.00922	94.77	<.0001	0.70278
upward	1	0.53737	0.10006	5.37	<.0001	0.03584
downdep	1	-1.13889	0.04953	-22.99	<.0001	-0.15536
subasst	1	-1.51400	0.04226	-35.83	<.0001	-0.24944
mandmin2	1	0.24712	0.07691	3.21	0.0013	0.02168
newcnvtn	1	0.10176	0.05088	2.00	0.0455	0.01356
custody	1	0.46138	0.03218	14.34	<.0001	0.10610
whitefemale	1	-0.20391	0.10472	-1.95	0.0516	-0.01313
blackmale	1	-0.01800	0.02940	-0.61	0.5404	-0.00462
blackfemale	1	-1.32728	0.08545	-15.53	<.0001	-0.10781
hispmale	1	-0.06275	0.04760	-1.32	0.1875	-0.01063
othermale	1	0.09070	0.08183	1.11	0.2677	0.00753
agedummy	1	0.04653	0.02949	1.58	0.1147	0.01070
educ	1	-0.16136	0.03843	-4.20	<.0001	-0.02837
citizen	1	-0.00421	0.06467	-0.07	0.9481	-0.00049523

Multivariate Analysis - Firearms
Booker

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	18815
Number of Observations Used	18815

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	40851	2723.39716	2155.71	<.0001
Error	18799	23750	1.26334		
Corrected Total	18814	64601			

Root MSE	1.12398	R-Square	0.6324
Dependent Mean	3.35016	Adj R-Sq	0.6321
Coeff Var	33.55021		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	-0.00721	0.04782	-0.15	0.8802	0
logmin	1	0.87513	0.00663	131.99	<.0001	0.65956
upward	1	0.59930	0.05062	11.84	<.0001	0.05277
downdep	1	-0.98649	0.02251	-43.83	<.0001	-0.20159
subasst	1	-1.36688	0.02926	-46.71	<.0001	-0.21633
mandmin2	1	0.22407	0.05780	3.88	0.0001	0.01736
newcnvtn	1	0.15852	0.03349	4.73	<.0001	0.02146
custody	1	0.59534	0.02145	27.76	<.0001	0.13746
whitefemale	1	-0.48597	0.06682	-7.27	<.0001	-0.03280
blackmale	1	0.08147	0.01902	4.28	<.0001	0.02186
blackfemale	1	-0.65936	0.06837	-9.64	<.0001	-0.04369
hispmale	1	0.01264	0.02952	0.43	0.6686	0.00237
othermale	1	-0.01497	0.04973	-0.30	0.7634	-0.00137
agedummy	1	0.00186	0.01920	0.10	0.9228	0.00043661
educ	1	-0.10926	0.02471	-4.42	<.0001	-0.01999
citizen	1	0.03982	0.03834	1.04	0.2989	0.00537

Multivariate Analysis - Firearms
Gall

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	22945
Number of Observations Used	22945

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	51879	3458.60945	1989.35	<.0001
Error	22929	39864	1.73856		
Corrected Total	22944	91743			

Root MSE	1.31855	R-Square	0.5655
Dependent Mean	3.32652	Adj R-Sq	0.5652
Coeff Var	39.63738		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	-0.30832	0.05099	-6.05	<.0001	0
logmin	1	0.90730	0.00762	119.03	<.0001	0.58910
upward	1	0.58834	0.05104	11.53	<.0001	0.05071
downdep	1	-1.10371	0.02122	-52.00	<.0001	-0.23954
subasst	1	-1.28422	0.03206	-40.05	<.0001	-0.18323
mandmin2	1	0.31384	0.06703	4.68	<.0001	0.02054
NEWCNVTN	1	0.16434	0.03913	4.20	<.0001	0.01867
custody	1	0.86617	0.02381	36.38	<.0001	0.17760
whitefemale	1	-0.57898	0.07079	-8.18	<.0001	-0.03642
blackmale	1	0.09705	0.02072	4.68	<.0001	0.02424
blackfemale	1	-0.90096	0.08342	-10.80	<.0001	-0.04796
hispmale	1	-0.00345	0.03016	-0.11	0.9089	-0.00063790
othermale	1	-0.03943	0.05862	-0.67	0.5012	-0.00301
agedummy	1	-0.01600	0.02072	-0.77	0.4399	-0.00342
educ	1	-0.10449	0.02637	-3.96	<.0001	-0.01759
citizen	1	-0.02431	0.03926	-0.62	0.5358	-0.00318

Change in Sentence Length for Each Race and Gender Pairing
White Male
Gall vs Koon

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	81084
Number of Observations Used	81084

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	17	362090	21299	7773.03	<.0001
Error	81066	222135	2.74017		
Corrected Total	81083	584225			

Root MSE	1.65535	R-Square	0.6198
Dependent Mean	2.64376	Adj R-Sq	0.6197
Coeff Var	62.61333		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.42149	0.03330	12.66	<.0001	0
logmin	1	0.82037	0.00308	266.02	<.0001	0.70455
drugtraff	1	0.28675	0.01761	16.28	<.0001	0.05005
sexual2	1	0.04515	0.05842	0.77	0.4395	0.00172
porn	1	0.51323	0.02542	20.19	<.0001	0.05207
immigration	1	0.31380	0.02902	10.81	<.0001	0.03200
othtype	1	-0.44820	0.02856	-15.69	<.0001	-0.03953
whitecoll	1	-0.20481	0.01939	-10.57	<.0001	-0.03327
upward	1	1.05416	0.04016	26.25	<.0001	0.05777
downdep	1	-1.35294	0.01462	-92.56	<.0001	-0.22882
subasst	1	-1.58345	0.01724	-91.84	<.0001	-0.23253
mandmin2	1	-0.02577	0.02811	-0.92	0.3593	-0.00211
NEWCNVTN	1	0.34694	0.02930	11.84	<.0001	0.02618
custody	1	0.70998	0.01379	51.50	<.0001	0.13018
gall	1	-0.06032	0.01378	-4.38	<.0001	-0.00995
agedummy	1	0.01378	0.01702	0.81	0.4180	0.00179
educ	1	-0.06966	0.01322	-5.27	<.0001	-0.01230
citizen	1	-0.16891	0.02174	-7.77	<.0001	-0.02063

Change in Sentence Length for Each Race and Gender Pairing
Black Male
Gall vs Koon

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	67184
Number of Observations Used	67184

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	17	198147	11656	8113.70	<.0001
Error	67166	96487	1.43655		
Corrected Total	67183	294634			

Root MSE	1.19856	R-Square	0.6725
Dependent Mean	3.63207	Adj R-Sq	0.6724
Coeff Var	32.99943		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.28292	0.02871	9.86	<.0001	0
logmin	1	0.81949	0.00323	254.05	<.0001	0.73522
drugtraff	1	0.14537	0.01141	12.74	<.0001	0.03470
sexual2	1	0.13251	0.07560	1.75	0.0796	0.00389
porn	1	0.14646	0.07995	1.83	0.0670	0.00408
immigration	1	0.32158	0.03473	9.26	<.0001	0.02438
othtype	1	-0.22504	0.02918	-7.71	<.0001	-0.01819
whitecoll	1	-0.21406	0.01685	-12.71	<.0001	-0.03691
upward	1	0.73528	0.03151	23.34	<.0001	0.05214
downdep	1	-0.89917	0.01264	-71.16	<.0001	-0.16834
subasst	1	-1.02383	0.01326	-77.18	<.0001	-0.19367
mandmin2	1	0.04057	0.01630	2.49	0.0128	0.00618
NEWCNVTN	1	0.18912	0.01904	9.93	<.0001	0.02259
custody	1	0.63819	0.01199	53.24	<.0001	0.13212
gall	1	-0.04112	0.01120	-3.67	0.0002	-0.00862
agedummy	1	-0.00743	0.01150	-0.65	0.5179	-0.00146
educ	1	-0.03573	0.01202	-2.97	0.0030	-0.00692
citizen	1	0.02021	0.02155	0.94	0.3484	0.00237

Change in Sentence Length for Each Race and Gender Pairing
Hispanic Male
Gall vs Koon

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	140498
Number of Observations Used	140498

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	17	219931	12937	10918.5	<.0001
Error	140480	166451	1.18488		
Corrected Total	140497	386382			

Root MSE	1.08852	R-Square	0.5692
Dependent Mean	2.90426	Adj R-Sq	0.5692
Coeff Var	37.48010		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.88412	0.01993	44.37	<.0001	0
logmin	1	0.48848	0.00146	334.85	<.0001	0.69942
drugtraff	1	0.17013	0.01442	11.80	<.0001	0.04854
sexual2	1	0.19372	0.07334	2.64	0.0083	0.00470
porn	1	0.64017	0.05402	11.85	<.0001	0.02150
immigration	1	-0.11189	0.01492	-7.50	<.0001	-0.03358
othtype	1	-0.69586	0.02690	-25.87	<.0001	-0.05232
whitecoll	1	-0.40182	0.01976	-20.33	<.0001	-0.05018
upward	1	1.09679	0.02068	53.02	<.0001	0.09421
downdep	1	-0.65497	0.00682	-96.07	<.0001	-0.18336
subasst	1	-0.69076	0.01184	-58.32	<.0001	-0.11198
mandmin2	1	0.46174	0.01635	28.25	<.0001	0.05290
NEWCNVTN	1	0.50654	0.02190	23.13	<.0001	0.04129
custody	1	0.93710	0.01121	83.63	<.0001	0.16509
gall	1	0.01385	0.00745	1.86	0.0629	0.00336
agedummy	1	0.10392	0.00717	14.50	<.0001	0.02592
educ	1	-0.10825	0.01136	-9.53	<.0001	-0.01751
citizen	1	0.01780	0.00859	2.07	0.0383	0.00448

Change in Sentence Length for Each Race and Gender Pairing
Other Male
Gall vs Koon

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	10199
Number of Observations Used	10199

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	17	47561	2797.72201	1020.89	<.0001
Error	10181	27901	2.74048		
Corrected Total	10198	75462			

Root MSE	1.65544	R-Square	0.6303
Dependent Mean	2.49806	Adj R-Sq	0.6296
Coeff Var	66.26903		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.52912	0.07592	6.97	<.0001	0
logmin	1	0.75205	0.00806	93.28	<.0001	0.71666
drugtraff	1	0.42392	0.04850	8.74	<.0001	0.07037
sexual2	1	0.18435	0.07123	2.59	0.0097	0.01704
porn	1	0.52902	0.14048	3.77	0.0002	0.02357
immigration	1	0.35580	0.08007	4.44	<.0001	0.03331
othtype	1	-0.56095	0.06897	-8.13	<.0001	-0.05757
whitecoll	1	-0.30382	0.05619	-5.41	<.0001	-0.04663
upward	1	0.95763	0.08773	10.92	<.0001	0.06751
downdep	1	-1.20925	0.04179	-28.94	<.0001	-0.19683
subasst	1	-1.68455	0.05192	-32.45	<.0001	-0.23004
mandmin2	1	-0.03975	0.09750	-0.41	0.6835	-0.00258
NEWCNVTN	1	0.21609	0.07326	2.95	0.0032	0.01823
custody	1	0.80654	0.03875	20.81	<.0001	0.14415
gall	1	-0.09004	0.04013	-2.24	0.0249	-0.01397
agedummy	1	0.02138	0.04182	0.51	0.6093	0.00324
educ	1	0.02293	0.03765	0.61	0.5425	0.00395
citizen	1	-0.16589	0.04144	-4.00	<.0001	-0.02649

Change in Sentence Length for Each Race and Gender Pairing
White Female
Gall vs Koon

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	17043
Number of Observations Used	17043

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	113290	7552.69321	1824.57	<.0001
Error	17027	70482	4.13944		
Corrected Total	17042	183773			

Root MSE	2.03456	R-Square	0.6165
Dependent Mean	1.24411	Adj R-Sq	0.6161
Coeff Var	163.53580		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.53598	0.09159	5.85	<.0001	0
logmin	1	0.87668	0.00660	132.86	<.0001	0.79440
drugtraff	1	0.48326	0.04161	11.61	<.0001	0.07109
immigration	1	0.27482	0.07600	3.62	0.0003	0.01898
othtype2	1	-0.22734	0.06228	-3.65	0.0003	-0.01811
violent	1	-0.05927	0.07257	-0.82	0.4141	-0.00412
upward	1	1.71938	0.14467	11.88	<.0001	0.05694
downdep	1	-2.12679	0.04122	-51.60	<.0001	-0.29226
subasst	1	-2.25036	0.04566	-49.29	<.0001	-0.28775
mandmin2	1	-0.17536	0.11038	-1.59	0.1121	-0.00784
NEWCNVTN	1	0.44374	0.09898	4.48	<.0001	0.02157
custody	1	0.80656	0.03533	22.83	<.0001	0.12071
gall	1	-0.13484	0.03690	-3.65	0.0003	-0.01793
agedummy	1	-0.03190	0.04238	-0.75	0.4516	-0.00367
educ	1	0.01920	0.03350	0.57	0.5665	0.00280
citizen	1	-0.42909	0.07374	-5.82	<.0001	-0.02941

Change in Sentence Length for Each Race and Gender Pairing
Black Female
Gall vs Koon

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	10658
Number of Observations Used	10658

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	82238	5482.52241	1367.12	<.0001
Error	10642	42677	4.01027		
Corrected Total	10657	124915			

Root MSE	2.00257	R-Square	0.6583
Dependent Mean	0.94337	Adj R-Sq	0.6579
Coeff Var	212.27871		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.43182	0.10837	3.98	<.0001	0
logmin	1	0.89630	0.00768	116.73	<.0001	0.84190
drugtraff	1	0.24393	0.05283	4.62	<.0001	0.03216
immigration	1	0.53373	0.13216	4.04	<.0001	0.02524
othtype2	1	-0.29058	0.09218	-3.15	0.0016	-0.01824
violent	1	-0.12516	0.08174	-1.53	0.1258	-0.00921
upward	1	1.52026	0.16678	9.12	<.0001	0.05231
downdep	1	-2.21423	0.05372	-41.22	<.0001	-0.26895
subasst	1	-2.39403	0.05609	-42.69	<.0001	-0.28379
mandmin2	1	-0.07187	0.12338	-0.58	0.5602	-0.00347
NEWCNVTN	1	0.47316	0.10702	4.42	<.0001	0.02553
custody	1	0.68535	0.04547	15.07	<.0001	0.09417
gall	1	-0.09461	0.04325	-2.19	0.0287	-0.01283
agedummy	1	-0.08223	0.05006	-1.64	0.1005	-0.00948
educ	1	-0.12248	0.04119	-2.97	0.0030	-0.01738
citizen	1	-0.16978	0.09132	-1.86	0.0630	-0.01175

Change in Sentence Length for Each Race and Gender Pairing
Hispanic Female
Gall vs Koon

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	13589
Number of Observations Used	13589

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	47319	3154.60131	945.14	<.0001
Error	13573	45303	3.33772		
Corrected Total	13588	92622			

Root MSE	1.82694	R-Square	0.5109
Dependent Mean	1.84646	Adj R-Sq	0.5103
Coeff Var	98.94296		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.13391	0.07020	1.91	0.0565	0
logmin	1	0.63059	0.00703	89.76	<.0001	0.67001
drugtraff	1	0.40397	0.05103	7.92	<.0001	0.07666
immigration	1	0.30451	0.05227	5.83	<.0001	0.05526
othtype2	1	-0.60598	0.08331	-7.27	<.0001	-0.04866
violent	1	-0.08218	0.11653	-0.71	0.4807	-0.00449
upward	1	1.97280	0.13578	14.53	<.0001	0.08826
downdep	1	-1.50137	0.03817	-39.33	<.0001	-0.26518
subasst	1	-1.67560	0.04996	-33.54	<.0001	-0.22795
mandmin2	1	0.41645	0.11672	3.57	0.0004	0.02206
NEWCNVTN	1	0.64415	0.11958	5.39	<.0001	0.03283
custody	1	1.19741	0.03845	31.14	<.0001	0.21988
gall	1	0.09188	0.03898	2.36	0.0184	0.01456
agedummy	1	0.12724	0.03788	3.36	0.0008	0.02074
educ	1	-0.05902	0.04529	-1.30	0.1926	-0.00814
citizen	1	-0.26935	0.03695	-7.29	<.0001	-0.05151

Change in Sentence Length for Each Race and Gender Pairing
Other Female
Gall vs Koon

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	2455
Number of Observations Used	2455

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	17851	1190.09627	267.90	<.0001
Error	2439	10835	4.44233		
Corrected Total	2454	28686			

Root MSE	2.10768	R-Square	0.6223
Dependent Mean	0.90818	Adj R-Sq	0.6200
Coeff Var	232.07657		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	-0.04767	0.18899	-0.25	0.8009	0
logmin	1	0.84072	0.01734	48.49	<.0001	0.80314
drugtraff	1	0.71236	0.11754	6.06	<.0001	0.09476
immigration	1	0.16182	0.15909	1.02	0.3092	0.01398
othtype2	1	-0.14677	0.15113	-0.97	0.3316	-0.01308
violent	1	0.11497	0.15742	0.73	0.4652	0.01086
upward	1	1.87543	0.32818	5.71	<.0001	0.07279
downdep	1	-2.03298	0.11316	-17.97	<.0001	-0.27228
subasst	1	-2.31772	0.13374	-17.33	<.0001	-0.26827
mandmin2	1	-0.30507	0.34484	-0.88	0.3764	-0.01144
NEWCNVTN	1	0.65278	0.22727	2.87	0.0041	0.03646
custody	1	0.85145	0.09699	8.78	<.0001	0.12148
gall	1	-0.02695	0.10211	-0.26	0.7918	-0.00338
agedummy	1	0.31343	0.11686	2.68	0.0074	0.03453
educ	1	-0.12214	0.09184	-1.33	0.1837	-0.01717
citizen	1	-0.21963	0.11717	-1.87	0.0610	-0.02497

Change in Sentence Length for Each Race and Gender Pairing
White Male
Gall vs PROTECT

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	75893
Number of Observations Used	75893

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	17	330156	19421	7339.59	<.0001
Error	75875	200769	2.64605		
Corrected Total	75892	530925			

Root MSE	1.62667	R-Square	0.6219
Dependent Mean	2.71681	Adj R-Sq	0.6218
Coeff Var	59.87414		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.40429	0.03406	11.87	<.0001	0
logmin	1	0.81776	0.00318	257.30	<.0001	0.70081
drugtraff	1	0.29967	0.01774	16.89	<.0001	0.05282
sexual2	1	0.07975	0.05839	1.37	0.1720	0.00313
porn	1	0.52967	0.02527	20.96	<.0001	0.05590
immigration	1	0.30764	0.02890	10.64	<.0001	0.03250
othtype	1	-0.43023	0.02910	-14.78	<.0001	-0.03827
whitecoll	1	-0.19716	0.01961	-10.05	<.0001	-0.03210
upward	1	1.05192	0.04012	26.22	<.0001	0.05949
downdep	1	-1.30540	0.01493	-87.43	<.0001	-0.22427
subasst	1	-1.54584	0.01764	-87.62	<.0001	-0.22775
mandmin2	1	-0.05930	0.02843	-2.09	0.0370	-0.00496
NEWCNVTN	1	0.34006	0.02877	11.82	<.0001	0.02697
custody	1	0.71635	0.01405	50.98	<.0001	0.13247
gall	1	-0.09225	0.01504	-6.13	<.0001	-0.01439
agedummy	1	0.01511	0.01748	0.86	0.3874	0.00197
educ	1	-0.07507	0.01346	-5.58	<.0001	-0.01343
citizen	1	-0.14051	0.02180	-6.44	<.0001	-0.01765

Change in Sentence Length for Each Race and Gender Pairing
Black Male
Gall vs PROTECT

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	63028
Number of Observations Used	63028

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	17	187040	11002	7671.00	<.0001
Error	63010	90374	1.43428		
Corrected Total	63027	277414			

Root MSE	1.19761	R-Square	0.6742
Dependent Mean	3.64576	Adj R-Sq	0.6741
Coeff Var	32.84946		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.24117	0.03049	7.91	<.0001	0
logmin	1	0.81730	0.00331	246.70	<.0001	0.73288
drugtraff	1	0.15262	0.01167	13.07	<.0001	0.03635
sexual2	1	0.17473	0.07708	2.27	0.0234	0.00518
porn	1	0.17807	0.08061	2.21	0.0272	0.00506
immigration	1	0.29311	0.03515	8.34	<.0001	0.02273
othtype	1	-0.19152	0.02982	-6.42	<.0001	-0.01559
whitecoll	1	-0.21694	0.01738	-12.48	<.0001	-0.03698
upward	1	0.74188	0.03162	23.47	<.0001	0.05400
downdep	1	-0.89391	0.01300	-68.74	<.0001	-0.16794
subasst	1	-1.03194	0.01376	-74.98	<.0001	-0.19241
mandmin2	1	0.03439	0.01715	2.00	0.0450	0.00510
NEWCNVTN	1	0.18411	0.01899	9.70	<.0001	0.02275
custody	1	0.66464	0.01256	52.93	<.0001	0.13529
gall	1	-0.01632	0.01236	-1.32	0.1868	-0.00318
agedummy	1	0.00044563	0.01196	0.04	0.9703	0.00008661
educ	1	-0.04191	0.01247	-3.36	0.0008	-0.00805
citizen	1	0.01752	0.02277	0.77	0.4417	0.00201

Change in Sentence Length for Each Race and Gender Pairing
Hispanic Male
Gall vs PROTECT

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	135100
Number of Observations Used	135100

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	17	212829	12519	10900.8	<.0001
Error	135082	155139	1.14848		
Corrected Total	135099	367968			

Root MSE	1.07167	R-Square	0.5784
Dependent Mean	2.90469	Adj R-Sq	0.5783
Coeff Var	36.89454		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.91113	0.02022	45.05	<.0001	0
logmin	1	0.47974	0.00144	332.05	<.0001	0.70160
drugtraff	1	0.21513	0.01431	15.04	<.0001	0.06096
sexual2	1	0.31139	0.07193	4.33	<.0001	0.00778
porn	1	0.66848	0.05340	12.52	<.0001	0.02292
immigration	1	-0.09873	0.01479	-6.68	<.0001	-0.02967
othtype	1	-0.64550	0.02741	-23.55	<.0001	-0.04753
whitecoll	1	-0.37923	0.01979	-19.16	<.0001	-0.04730
upward	1	1.09510	0.02045	53.56	<.0001	0.09599
downdep	1	-0.61663	0.00692	-89.16	<.0001	-0.17243
subasst	1	-0.66044	0.01210	-54.57	<.0001	-0.10531
mandmin2	1	0.41910	0.01707	24.55	<.0001	0.04619
NEWCNVTN	1	0.50732	0.02186	23.21	<.0001	0.04183
custody	1	0.96271	0.01156	83.28	<.0001	0.16620
gall	1	-0.05143	0.00795	-6.47	<.0001	-0.01173
agedummy	1	0.09779	0.00724	13.52	<.0001	0.02435
educ	1	-0.09621	0.01150	-8.37	<.0001	-0.01552
citizen	1	0.03743	0.00873	4.29	<.0001	0.00940

Change in Sentence Length for Each Race and Gender Pairing
Other Male
Gall vs PROTECT

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	9919
Number of Observations Used	9919

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	17	46516	2736.25299	1017.26	<.0001
Error	9901	26632	2.68981		
Corrected Total	9918	73148			

Root MSE	1.64007	R-Square	0.6359
Dependent Mean	2.53824	Adj R-Sq	0.6353
Coeff Var	64.61436		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.45996	0.07720	5.96	<.0001	0
logmin	1	0.75982	0.00823	92.36	<.0001	0.71382
drugtraff	1	0.44224	0.04863	9.09	<.0001	0.07374
sexual2	1	0.22528	0.07142	3.15	0.0016	0.02092
porn	1	0.55617	0.14244	3.90	<.0001	0.02458
immigration	1	0.31020	0.08028	3.86	0.0001	0.02898
othtype	1	-0.50531	0.06979	-7.24	<.0001	-0.05147
whitecoll	1	-0.30122	0.05676	-5.31	<.0001	-0.04605
upward	1	1.00024	0.08816	11.35	<.0001	0.07061
downdep	1	-1.23598	0.04231	-29.21	<.0001	-0.20088
subasst	1	-1.73306	0.05264	-32.92	<.0001	-0.23402
mandmin2	1	-0.09043	0.09318	-0.97	0.3318	-0.00623
NEWCNVTN	1	0.22309	0.07000	3.19	0.0014	0.01989
custody	1	0.81186	0.03900	20.81	<.0001	0.14499
gall	1	-0.01117	0.04217	-0.26	0.7911	-0.00168
agedummy	1	0.00852	0.04196	0.20	0.8390	0.00130
educ	1	0.04834	0.03816	1.27	0.2053	0.00833
citizen	1	-0.20590	0.04170	-4.94	<.0001	-0.03277

Change in Sentence Length for Each Race and Gender Pairing
White Female
Gall vs PROTECT

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	16034
Number of Observations Used	16034

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	106649	7109.93348	1717.85	<.0001
Error	16018	66296	4.13885		
Corrected Total	16033	172945			

Root MSE	2.03442	R-Square	0.6167
Dependent Mean	1.29110	Adj R-Sq	0.6163
Coeff Var	157.57222		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.51082	0.09377	5.45	<.0001	0
logmin	1	0.88121	0.00683	128.97	<.0001	0.79229
drugtraff	1	0.43269	0.04293	10.08	<.0001	0.06377
immigration	1	0.28979	0.07575	3.83	0.0001	0.02066
othtype2	1	-0.19158	0.06488	-2.95	0.0032	-0.01511
violent	1	-0.06578	0.07424	-0.89	0.3757	-0.00462
upward	1	1.74752	0.14577	11.99	<.0001	0.05920
downdep	1	-2.09946	0.04257	-49.32	<.0001	-0.28908
subasst	1	-2.28522	0.04702	-48.60	<.0001	-0.29157
mandmin2	1	-0.24582	0.11150	-2.20	0.0275	-0.01127
NEWCNVTN	1	0.44692	0.09886	4.52	<.0001	0.02243
custody	1	0.84180	0.03653	23.04	<.0001	0.12632
gall	1	-0.12355	0.04093	-3.02	0.0025	-0.01531
agedummy	1	-0.06702	0.04389	-1.53	0.1268	-0.00769
educ	1	0.05851	0.03443	1.70	0.0893	0.00855
citizen	1	-0.40970	0.07372	-5.56	<.0001	-0.02889

Change in Sentence Length for Each Race and Gender Pairing
Black Female
Gall vs PROTECT

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	9757
Number of Observations Used	9757

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	77148	5143.20433	1270.43	<.0001
Error	9741	39436	4.04841		
Corrected Total	9756	116584			

Root MSE	2.01207	R-Square	0.6617
Dependent Mean	0.90768	Adj R-Sq	0.6612
Coeff Var	221.67114		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.39406	0.11781	3.34	0.0008	0
logmin	1	0.90934	0.00804	113.13	<.0001	0.84721
drugtraff	1	0.24370	0.05578	4.37	<.0001	0.03126
immigration	1	0.41318	0.13197	3.13	0.0017	0.02063
othtype2	1	-0.37717	0.09247	-4.08	<.0001	-0.02458
violent	1	-0.33373	0.08226	-4.06	<.0001	-0.02561
upward	1	1.65822	0.16759	9.89	<.0001	0.05902
downdep	1	-2.21850	0.05663	-39.18	<.0001	-0.26769
subasst	1	-2.47355	0.05899	-41.93	<.0001	-0.29178
mandmin2	1	-0.08638	0.13840	-0.62	0.5326	-0.00385
NEWCNVTN	1	0.40815	0.10706	3.81	0.0001	0.02293
custody	1	0.73160	0.04768	15.35	<.0001	0.09985
gall	1	-0.03009	0.04866	-0.62	0.5364	-0.00377
agedummy	1	-0.09759	0.05335	-1.83	0.0674	-0.01099
educ	1	-0.00988	0.04300	-0.23	0.8183	-0.00139
citizen	1	-0.23204	0.09815	-2.36	0.0181	-0.01564

Change in Sentence Length for Each Race and Gender Pairing
Hispanic Female
Gall vs PROTECT

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	12995
Number of Observations Used	12995

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	44950	2996.69675	922.86	<.0001
Error	12979	42145	3.24718		
Corrected Total	12994	87096			

Root MSE	1.80199	R-Square	0.5161
Dependent Mean	1.86853	Adj R-Sq	0.5155
Coeff Var	96.43891		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.15154	0.07141	2.12	0.0339	0
logmin	1	0.61622	0.00701	87.92	<.0001	0.66952
drugtraff	1	0.49929	0.05147	9.70	<.0001	0.09492
immigration	1	0.37070	0.05205	7.12	<.0001	0.06868
othtype2	1	-0.59303	0.08629	-6.87	<.0001	-0.04636
violent	1	0.00226	0.11414	0.02	0.9842	0.00012873
upward	1	1.96464	0.12991	15.12	<.0001	0.09342
downdep	1	-1.39860	0.03910	-35.77	<.0001	-0.24606
subasst	1	-1.67776	0.05059	-33.16	<.0001	-0.22797
mandmin2	1	0.37507	0.12430	3.02	0.0026	0.01890
NEWCNVTN	1	0.66245	0.12037	5.50	<.0001	0.03410
custody	1	1.19085	0.03921	30.37	<.0001	0.21929
gall	1	0.00423	0.04162	0.10	0.9190	0.00063257
agedummy	1	0.10080	0.03832	2.63	0.0085	0.01655
educ	1	-0.06174	0.04601	-1.34	0.1797	-0.00853
citizen	1	-0.21555	0.03740	-5.76	<.0001	-0.04159

Change in Sentence Length for Each Race and Gender Pairing
Other Female
Gall vs PROTECT

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	2364
Number of Observations Used	2364

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	17092	1139.46581	254.70	<.0001
Error	2348	10504	4.47381		
Corrected Total	2363	27596			

Root MSE	2.11514	R-Square	0.6194
Dependent Mean	0.96484	Adj R-Sq	0.6169
Coeff Var	219.22226		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	-0.08509	0.19189	-0.44	0.6575	0
logmin	1	0.83818	0.01796	46.67	<.0001	0.79290
drugtraff	1	0.71185	0.12060	5.90	<.0001	0.09435
immigration	1	0.17531	0.15987	1.10	0.2729	0.01535
othtype2	1	-0.04399	0.15164	-0.29	0.7718	-0.00401
violent	1	0.41011	0.16276	2.52	0.0118	0.03842
upward	1	1.88634	0.35681	5.29	<.0001	0.06853
downdep	1	-2.00001	0.11652	-17.17	<.0001	-0.26691
subasst	1	-2.38794	0.13522	-17.66	<.0001	-0.27804
mandmin2	1	-0.26516	0.33086	-0.80	0.4230	-0.01072
NEWCNVTN	1	0.66409	0.22194	2.99	0.0028	0.03893
custody	1	0.76778	0.09840	7.80	<.0001	0.11045
gall	1	0.10300	0.10981	0.94	0.3484	0.01236
agedummy	1	0.31510	0.11942	2.64	0.0084	0.03492
educ	1	-0.21360	0.09371	-2.28	0.0227	-0.03008
citizen	1	-0.30396	0.11761	-2.58	0.0098	-0.03519

Change in Sentence Length for Each Race and Gender Pairing
White Male
Gall vs Booker

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	102552
Number of Observations Used	102552

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	17	449363	26433	10046.0	<.0001
Error	102534	269788	2.63121		
Corrected Total	102551	719152			

Root MSE	1.62210	R-Square	0.6249
Dependent Mean	2.73482	Adj R-Sq	0.6248
Coeff Var	59.31289		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.36616	0.02887	12.68	<.0001	0
logmin	1	0.82445	0.00277	298.12	<.0001	0.70064
drugtraff	1	0.31691	0.01524	20.80	<.0001	0.05574
sexual2	1	0.12491	0.04791	2.61	0.0091	0.00516
porn	1	0.49908	0.02170	23.00	<.0001	0.05263
immigration	1	0.29087	0.02532	11.49	<.0001	0.02932
othtype	1	-0.40367	0.02463	-16.39	<.0001	-0.03640
whitecoll	1	-0.20266	0.01673	-12.11	<.0001	-0.03309
upward	1	1.09627	0.03358	32.64	<.0001	0.06344
downdep	1	-1.29814	0.01259	-103.14	<.0001	-0.22252
subasst	1	-1.54129	0.01531	-100.69	<.0001	-0.22664
mandmin2	1	-0.01754	0.02025	-0.87	0.3862	-0.00185
NEWCNVTN	1	0.33861	0.02402	14.10	<.0001	0.02763
custody	1	0.68908	0.01203	57.29	<.0001	0.12756
gall	1	-0.05657	0.01072	-5.28	<.0001	-0.01055
agedummy	1	-0.00025028	0.01510	-0.02	0.9868	-0.00003228
educ	1	-0.07266	0.01153	-6.30	<.0001	-0.01301
citizen	1	-0.13734	0.01908	-7.20	<.0001	-0.01658

Change in Sentence Length for Each Race and Gender Pairing
Black Male
Gall vs Booker

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	88032
Number of Observations Used	88032

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	17	251846	14814	10888.4	<.0001
Error	88014	119750	1.36058		
Corrected Total	88031	371596			

Root MSE	1.16644	R-Square	0.6777
Dependent Mean	3.68679	Adj R-Sq	0.6777
Coeff Var	31.63830		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.32325	0.02495	12.96	<.0001	0
logmin	1	0.81073	0.00279	290.12	<.0001	0.73215
drugtraff	1	0.14609	0.00977	14.96	<.0001	0.03555
sexual2	1	0.11247	0.06506	1.73	0.0839	0.00333
porn	1	0.16054	0.07082	2.27	0.0234	0.00437
immigration	1	0.24177	0.02929	8.25	<.0001	0.01890
othtype	1	-0.19069	0.02477	-7.70	<.0001	-0.01566
whitecoll	1	-0.24163	0.01447	-16.70	<.0001	-0.04165
upward	1	0.82853	0.02603	31.83	<.0001	0.06167
downdep	1	-0.82791	0.01050	-78.82	<.0001	-0.16018
subasst	1	-0.99179	0.01159	-85.56	<.0001	-0.18937
mandmin2	1	0.07034	0.01254	5.61	<.0001	0.01284
NEWCNVTN	1	0.18102	0.01543	11.73	<.0001	0.02323
custody	1	0.63760	0.01038	61.44	<.0001	0.13211
gall	1	-0.03723	0.00847	-4.39	<.0001	-0.00898
agedummy	1	0.01698	0.00987	1.72	0.0852	0.00336
educ	1	-0.05045	0.01030	-4.90	<.0001	-0.00987
citizen	1	-0.02970	0.01894	-1.57	0.1168	-0.00344

Change in Sentence Length for Each Race and Gender Pairing
Hispanic Male
Gall vs Booker

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	179287
Number of Observations Used	179287

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	17	273491	16088	14675.6	<.0001
Error	179269	196518	1.09622		
Corrected Total	179286	470009			

Root MSE	1.04701	R-Square	0.5819
Dependent Mean	2.96894	Adj R-Sq	0.5818
Coeff Var	35.26526		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.87575	0.01658	52.81	<.0001	0
logmin	1	0.48622	0.00128	380.51	<.0001	0.69489
drugtraff	1	0.19327	0.01198	16.13	<.0001	0.05624
sexual2	1	0.22614	0.06148	3.68	0.0002	0.00571
porn	1	0.64290	0.04546	14.14	<.0001	0.02235
immigration	1	-0.09432	0.01233	-7.65	<.0001	-0.02897
othtype	1	-0.64157	0.02315	-27.71	<.0001	-0.04823
whitecoll	1	-0.39608	0.01668	-23.74	<.0001	-0.05022
upward	1	1.12679	0.01706	66.03	<.0001	0.10248
downdep	1	-0.59799	0.00576	-103.84	<.0001	-0.17242
subasst	1	-0.62321	0.01019	-61.15	<.0001	-0.10280
mandmin2	1	0.46233	0.01202	38.47	<.0001	0.06469
NEWCNVTN	1	0.45815	0.01774	25.82	<.0001	0.04041
custody	1	0.95000	0.00983	96.67	<.0001	0.16610
gall	1	-0.02708	0.00523	-5.17	<.0001	-0.00810
agedummy	1	0.10335	0.00613	16.87	<.0001	0.02626
educ	1	-0.08577	0.00969	-8.85	<.0001	-0.01418
citizen	1	0.01932	0.00725	2.67	0.0077	0.00499

Change in Sentence Length for Each Race and Gender Pairing
Other Male
Gall vs Booker

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	13950
Number of Observations Used	13950

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	17	63438	3731.62996	1483.21	<.0001
Error	13932	35052	2.51591		
Corrected Total	13949	98489			

Root MSE	1.58616	R-Square	0.6441
Dependent Mean	2.63200	Adj R-Sq	0.6437
Coeff Var	60.26446		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.49844	0.06127	8.14	<.0001	0
logmin	1	0.76722	0.00686	111.82	<.0001	0.72025
drugtraff	1	0.46914	0.03973	11.81	<.0001	0.08117
sexual2	1	0.14975	0.05915	2.53	0.0114	0.01397
porn	1	0.63066	0.12012	5.25	<.0001	0.02751
immigration	1	0.31459	0.06576	4.78	<.0001	0.02971
othtype	1	-0.46655	0.05840	-7.99	<.0001	-0.04732
whitecoll	1	-0.21944	0.04651	-4.72	<.0001	-0.03403
upward	1	1.10228	0.07034	15.67	<.0001	0.08115
downdep	1	-1.19995	0.03404	-35.26	<.0001	-0.19912
subasst	1	-1.50177	0.04260	-35.26	<.0001	-0.21232
mandmin2	1	-0.05432	0.06252	-0.87	0.3849	-0.00476
NEWCNVTN	1	0.25944	0.05779	4.49	<.0001	0.02342
custody	1	0.77244	0.03192	24.20	<.0001	0.14045
gall	1	-0.08413	0.02780	-3.03	0.0025	-0.01571
agedummy	1	-0.01471	0.03434	-0.43	0.6685	-0.00228
educ	1	-0.05069	0.03125	-1.62	0.1048	-0.00885
citizen	1	-0.19776	0.03394	-5.83	<.0001	-0.03215

Change in Sentence Length for Each Race and Gender Pairing
White Female
Gall vs Booker

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	21631
Number of Observations Used	21631

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	142273	9484.86554	2387.88	<.0001
Error	21615	85857	3.97209		
Corrected Total	21630	228130			

Root MSE	1.99301	R-Square	0.6236
Dependent Mean	1.37009	Adj R-Sq	0.6234
Coeff Var	145.46516		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.44054	0.07884	5.59	<.0001	0
logmin	1	0.87992	0.00583	150.84	<.0001	0.79270
drugtraff	1	0.49048	0.03619	13.55	<.0001	0.07304
immigration	1	0.27589	0.06437	4.29	<.0001	0.01970
othtype2	1	-0.23677	0.05498	-4.31	<.0001	-0.01879
violent	1	-0.03855	0.06194	-0.62	0.5337	-0.00277
upward	1	1.84130	0.11601	15.87	<.0001	0.06696
downdep	1	-1.99872	0.03537	-56.52	<.0001	-0.27840
subasst	1	-2.19904	0.03997	-55.02	<.0001	-0.28299
mandmin2	1	-0.18414	0.07537	-2.44	0.0146	-0.01088
NEWCNVTN	1	0.52837	0.07962	6.64	<.0001	0.02809
custody	1	0.77803	0.03049	25.52	<.0001	0.11823
gall	1	-0.16124	0.02813	-5.73	<.0001	-0.02446
agedummy	1	-0.03745	0.03687	-1.02	0.3098	-0.00436
educ	1	0.01615	0.02909	0.56	0.5787	0.00238
citizen	1	-0.35325	0.06425	-5.50	<.0001	-0.02426

Change in Sentence Length for Each Race and Gender Pairing
Black Female
Gall vs Booker

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	13303
Number of Observations Used	13303

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	103502	6900.12716	1721.48	<.0001
Error	13287	53258	4.00825		
Corrected Total	13302	156760			

Root MSE	2.00206	R-Square	0.6603
Dependent Mean	0.96670	Adj R-Sq	0.6599
Coeff Var	207.10189		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.56011	0.10113	5.54	<.0001	0
logmin	1	0.90058	0.00694	129.83	<.0001	0.84386
drugtraff	1	0.27155	0.04750	5.72	<.0001	0.03521
immigration	1	0.44547	0.11599	3.84	0.0001	0.02175
othtype2	1	-0.18675	0.07787	-2.40	0.0165	-0.01239
violent	1	-0.10837	0.07060	-1.53	0.1248	-0.00828
upward	1	1.70523	0.13746	12.41	<.0001	0.06349
downdep	1	-2.13703	0.04728	-45.20	<.0001	-0.26199
subasst	1	-2.39703	0.05100	-47.00	<.0001	-0.28326
mandmin2	1	-0.03246	0.09210	-0.35	0.7245	-0.00193
NEWCNVTN	1	0.46382	0.09117	5.09	<.0001	0.02631
custody	1	0.69704	0.04066	17.14	<.0001	0.09600
gall	1	-0.12509	0.03565	-3.51	0.0005	-0.01813
agedummy	1	-0.08079	0.04574	-1.77	0.0774	-0.00909
educ	1	-0.02373	0.03665	-0.65	0.5174	-0.00337
citizen	1	-0.36659	0.08523	-4.30	<.0001	-0.02440

Change in Sentence Length for Each Race and Gender Pairing
Hispanic Female
Gall vs Booker

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	17703
Number of Observations Used	17703

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	60103	4006.83409	1256.95	<.0001
Error	17687	56382	3.18774		
Corrected Total	17702	116484			

Root MSE	1.78542	R-Square	0.5160
Dependent Mean	1.91649	Adj R-Sq	0.5156
Coeff Var	93.16138		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.16184	0.05854	2.76	0.0057	0
logmin	1	0.62753	0.00610	102.82	<.0001	0.66449
drugtraff	1	0.48205	0.04410	10.93	<.0001	0.09238
immigration	1	0.33783	0.04400	7.68	<.0001	0.06342
othtype2	1	-0.43461	0.07166	-6.06	<.0001	-0.03540
violent	1	0.07675	0.09831	0.78	0.4349	0.00435
upward	1	1.68936	0.09728	17.37	<.0001	0.09219
downdep	1	-1.39943	0.03263	-42.89	<.0001	-0.25098
subasst	1	-1.61675	0.04349	-37.18	<.0001	-0.21942
mandmin2	1	0.40380	0.08483	4.76	<.0001	0.02603
NEWCNVTN	1	0.53333	0.09756	5.47	<.0001	0.02911
custody	1	1.15464	0.03304	34.94	<.0001	0.21437
gall	1	0.03431	0.02768	1.24	0.2153	0.00655
agedummy	1	0.09449	0.03254	2.90	0.0037	0.01557
educ	1	-0.03020	0.03885	-0.78	0.4371	-0.00422
citizen	1	-0.27414	0.03131	-8.76	<.0001	-0.05329

Change in Sentence Length for Each Race and Gender Pairing
Other Female
Gall vs Booker

The REG Procedure
Model: MODEL1
Dependent Variable: logsplit

Number of Observations Read	3370
Number of Observations Used	3370

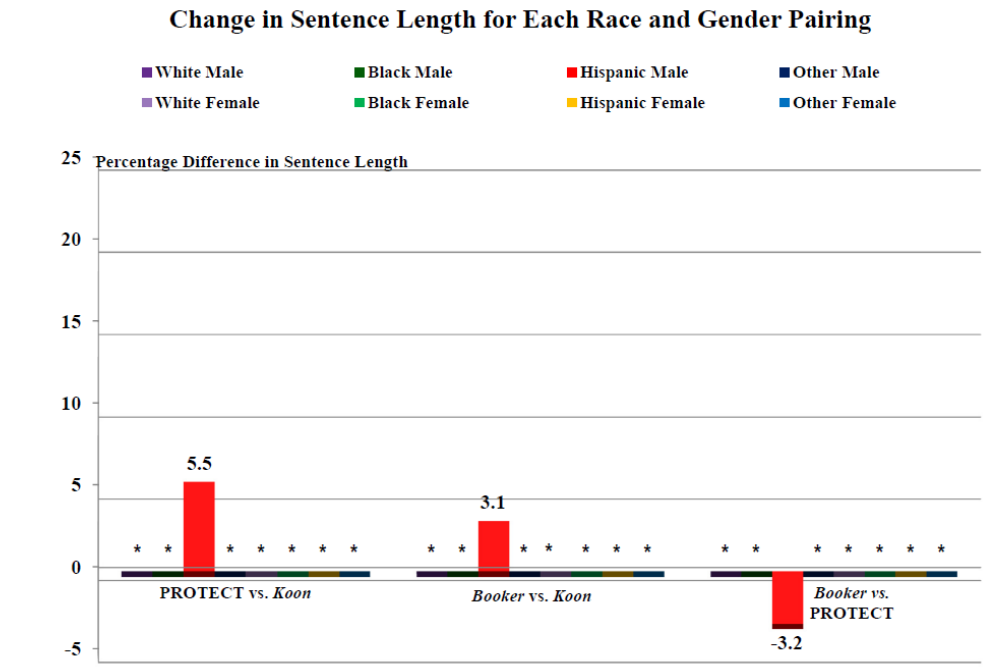
Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	15	24173	1611.51981	397.33	<.0001
Error	3354	13603	4.05584		
Corrected Total	3369	37776			

Root MSE	2.01391	R-Square	0.6399
Dependent Mean	1.09796	Adj R-Sq	0.6383
Coeff Var	183.42280		

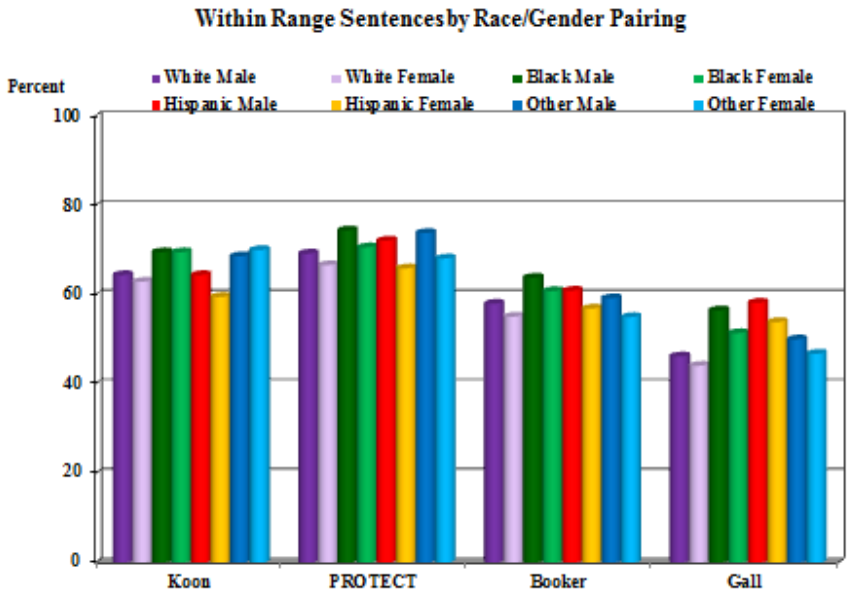
Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	Standardized Estimate
Intercept	1	0.11439	0.14667	0.78	0.4355	0
logmin	1	0.82515	0.01428	57.80	<.0001	0.79334
drugtraff	1	0.85814	0.09638	8.90	<.0001	0.11736
immigration	1	0.11834	0.12602	0.94	0.3478	0.01070
othtype2	1	0.02687	0.12207	0.22	0.8258	0.00247
violent	1	0.25336	0.13300	1.91	0.0569	0.02366
upward	1	2.18851	0.24393	8.97	<.0001	0.09516
downdep	1	-1.84890	0.09145	-20.22	<.0001	-0.25384
subasst	1	-2.05999	0.10973	-18.77	<.0001	-0.24248
mandmin2	1	-0.36493	0.21650	-1.69	0.0920	-0.01858
NEWCNVTN	1	0.77069	0.17173	4.49	<.0001	0.04747
custody	1	0.84436	0.07873	10.73	<.0001	0.12401
gall	1	-0.17244	0.07092	-2.43	0.0151	-0.02562
agedummy	1	0.21255	0.09531	2.23	0.0258	0.02416
educ	1	-0.08661	0.07492	-1.16	0.2477	-0.01241
citizen	1	-0.35381	0.09269	-3.82	0.0001	-0.04194



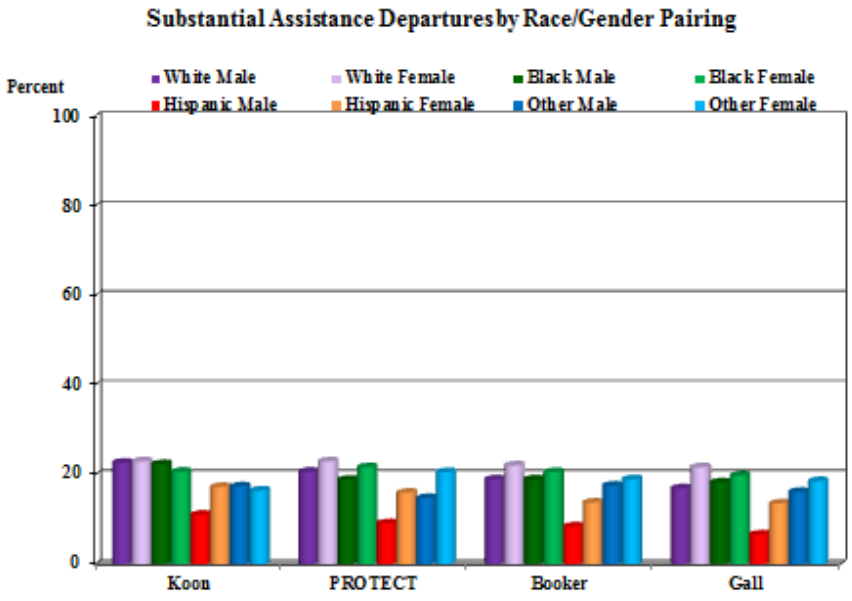
•Indicates that the difference between the two groups was not statistically significant.
SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

ADDITIONAL RESULTS OF SIMPLISTIC ANALYSIS

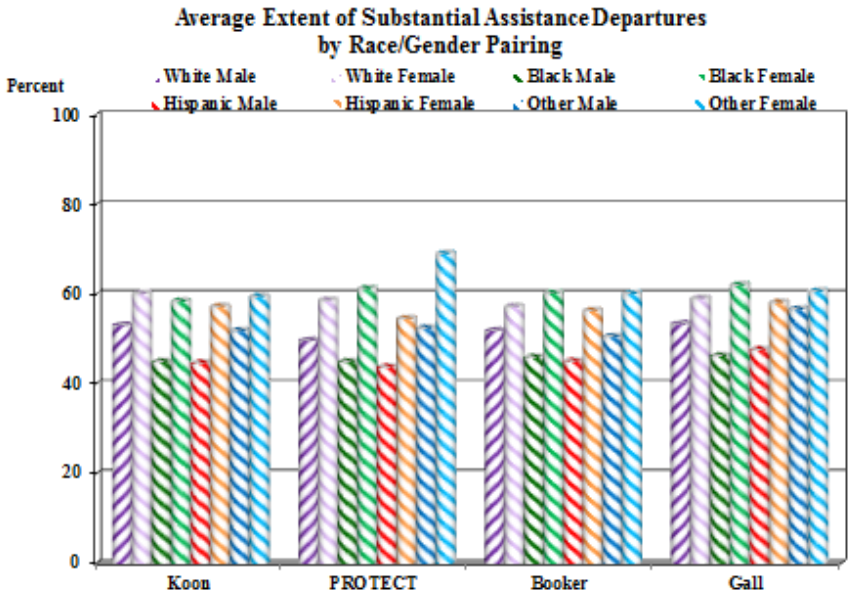


SOURCE: U.S. Sentencing Commission, 1999-2011 Datafiles, USSCFY99-USSCFY11.

ADDITIONAL RESULTS OF SIMPLISTIC ANALYSIS



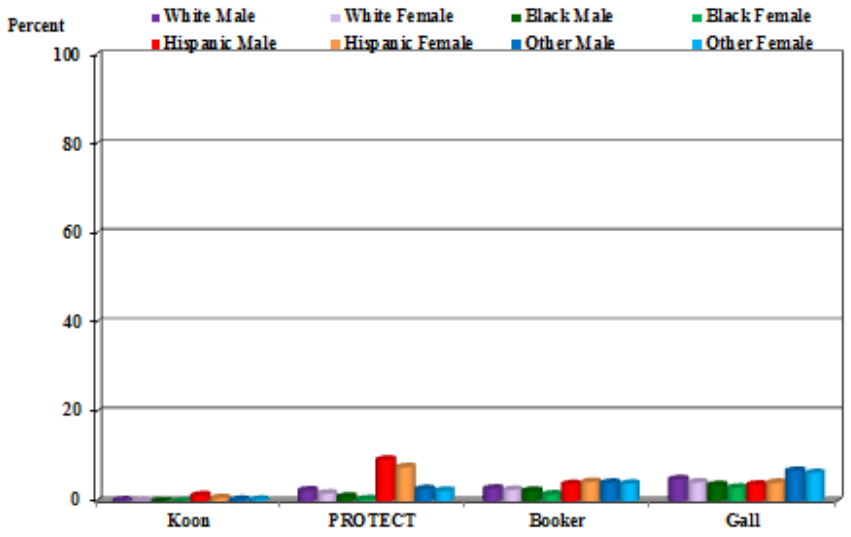
SOURCE: U.S. Sentencing Commission, 1999-2011 Datafiles, USSCFY99-USSCFY11.



SOURCE: U.S. Sentencing Commission, 1999-2011 Datafiles, USSCFY99-USSCFY11.

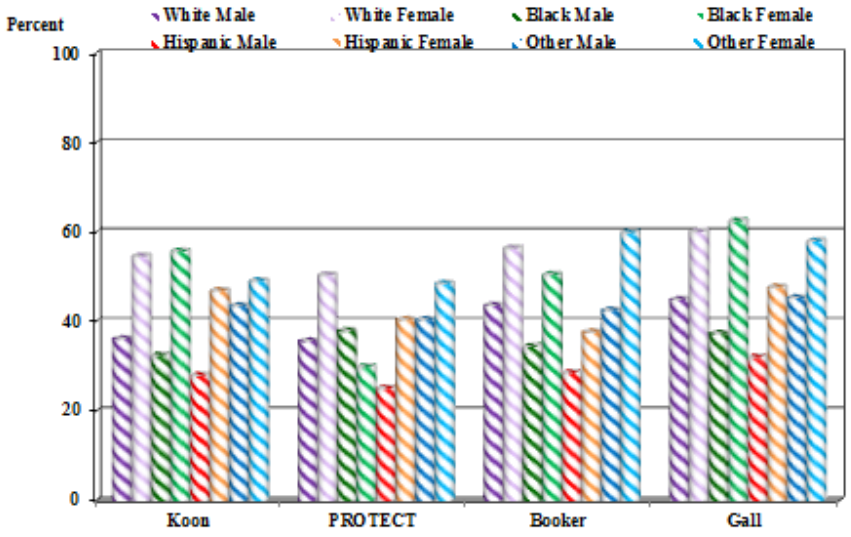
ADDITIONAL RESULTS OF SIMPLISTIC ANALYSIS

Other Government Sponsored Below Ranges Sentences* by Race/Gender Pairing



"Other Government Sponsored Below Range Sentences" refers to Government Sponsored Below Range Sentences that are not substantial assistance or Early Disposition Departures.

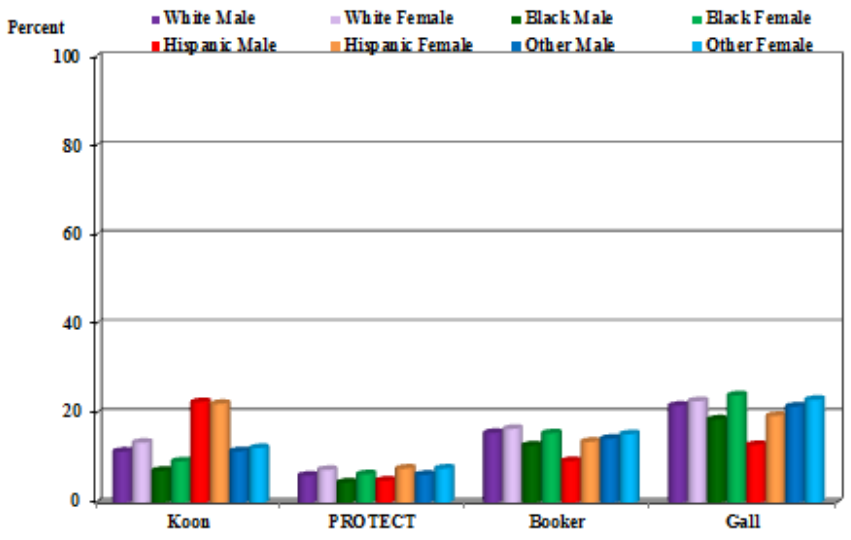
Average Extent of Other Government Sponsored Below Range Sentences by Race/Gender Pairing



"Other Government Sponsored Below Range Sentences" refers to Government Sponsored Below Range Sentences that are not substantial assistance or Early Disposition Departures.

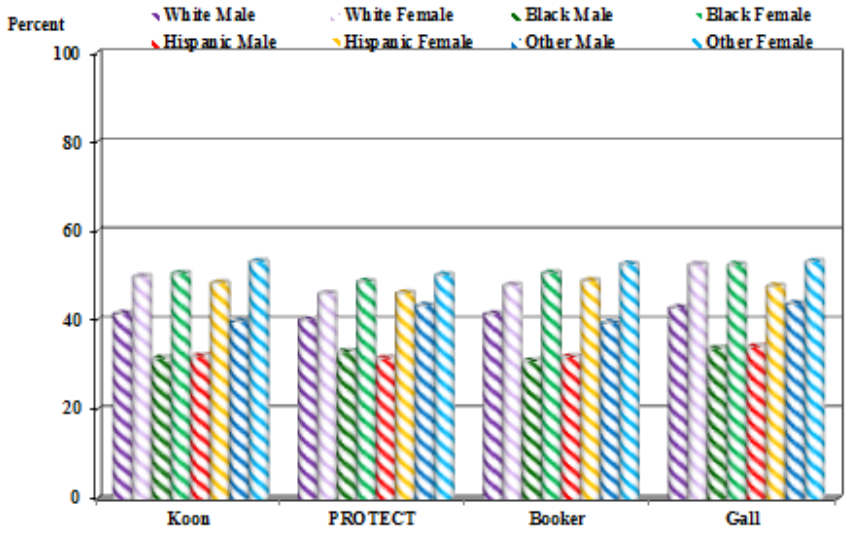
ADDITIONAL RESULTS OF SIMPLISTIC ANALYSIS

Other Below Range Sentences by Race/Gender Pairing



SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.

Average Extent of Other Below Range Sentences by Race/Gender Pairing



SOURCE: U.S. Sentencing Commission, 1999 -2011 Datafiles, USSCFY99-USSCFY11.