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Is Justice Blind? An Examination of Disparities
in Homicide Sentencing in Colombia, 1980-2000

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1

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Is justice blind? An examination of disparities in homicide sentencing in Colombia, 1980-2000*

Mariana Martínez Cuéllar⁺
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Bogota, December 2007

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ABSTRACT

Is justice blind?

An examination of disparities in homicide sentencing in Colombia, 1980-2000

Evidence has repeatedly shown that disparities in crime sentences can be attributed to certain variables considered outside the legal dimensions of the case. The majority of research that investigates factors that contribute to such disparities has primarily focused on crimes of varying severities adjudicated in the U.S. court system. We expand research on this topic by focusing on disparities in homicide sentences using data from over 9000 homicide cases tried in Colombia from 1980 – 2000. We specifically explore whether judges use substantive rationality when deciding the length of the offender's sentence and if the sentence should be above the legal minimum set for the severity of the crime according to the criminal code under which it is adjudicated. Results reveal that disparities in homicide sentences can be attributed to extra-legal variables such as: the city in which the homicide trial took place, where the body of the victim was retrieved, and whether the defendant was identified by an ID parade. However, we also find evidence that suggests that legal variables such as the defendant's previous criminal record and the aggravating circumstances of the case engender greater differences in sentence outcomes than non-legal variables previously mentioned. Explanations and policy implications are discussed.

JEL Classification: K14, K42

Key Words: Sentence Disparities, Homicide, Colombian Criminal Law

RESUMEN

Es la justicia ciega?

Un examen de las disparidades in las sentencias por homicidio en Colombia, 1980-2000

La evidencia ha mostrado en forma repetidamente que las disparidades en las sentencias penales pueden ser atribuidas a ciertas variables que están por fuera de la dimensión legal del caso. La mayoría de los trabajos que investigan los factores que contribuyen a tales disparidades se han focalizado principalmente en el caso de los Estados Unidos. Aquí se amplía el análisis de este problema para el caso de las sentencias por homicidio utilizando información para Colombia de más de 9000 casos juzgados en Colombia para el período 1980-2000. Se explora específicamente si los jueces utilizan racionalidad sustantiva cuando deciden sobre la duración de la sentencia y si la sentencia debe estar por encima del mínimo legal establecida en el código penal que rige el proceso. Los resultados revelan que las disparidades en las sentencias por homicidio pueden ser atribuidas a variables extralegales tales como la ciudad en donde el homicidio tuvo lugar, el sitio del levantamiento del cuerpo de la víctima y la forma como se identificó el acusado. No obstante, se encuentra también evidencia que sugiere que variables legales tales como el record criminal del acusado y las circunstancias de agravación generan mayores diferencias en las sentencias que las variables extralegales previamente mencionadas. Se discuten posibles explicaciones e implicaciones de política.

Clasificación JEL: K14, K42

Palabras Clave: Disparidades en sentencias, Homicidio, Derecho Penal Colombiano

INTRODUCTION

Although some research has been done in Colombia to identify which factors determine successful criminal investigations¹, no study has analyzed whether disparities found in homicide sentences are attributed to variables found outside the legal dimensions of the case. We fill this gap in order to understand which extra-legal characteristics contribute to such disparities and discuss whether sentencing guidelines should be implemented.

Unlike current research that has primarily examined characteristics of the offender to understand why sentence disparities exist, we investigate extra-legal variables such as the contextual factors of the trial and homicide, victim characteristics, and the forensic evidence presented during the adjudication of the case.

Countries like the United States have long debated why sentence disparities exist. Guidelines have been implemented to limit differences in sentence outcomes and have obligated judges to use a drier method to convict and sentence offenders. However, disparities continue to appear despite policy that aims to eliminate if not reduce them. Although this issue is only beginning to surface in Colombia, results from this study have identified variations between sentences can be partially attributed to non-legal case characteristics for comparable homicides. This evidence should give impetus to a debate about whether sentencing guidelines ought to be implemented to minimize sentence disparities in Colombia.

This study uses information from 3,052 homicide cases whose defendants were tried and sentenced in four Colombian cities (Bogotá, Medellín, Cali and Barranquilla) between 1980 and 2000. Two econometric models have been developed to analyze the impartiality of the Colombian justice system towards defendants who have been accused of homicide. The first model unearths which variables determine the length of the sentence the defendant receives for committing homicide. The second model uncovers which variables may persuade a judge to impose a sentence that is higher than the legal minimum.

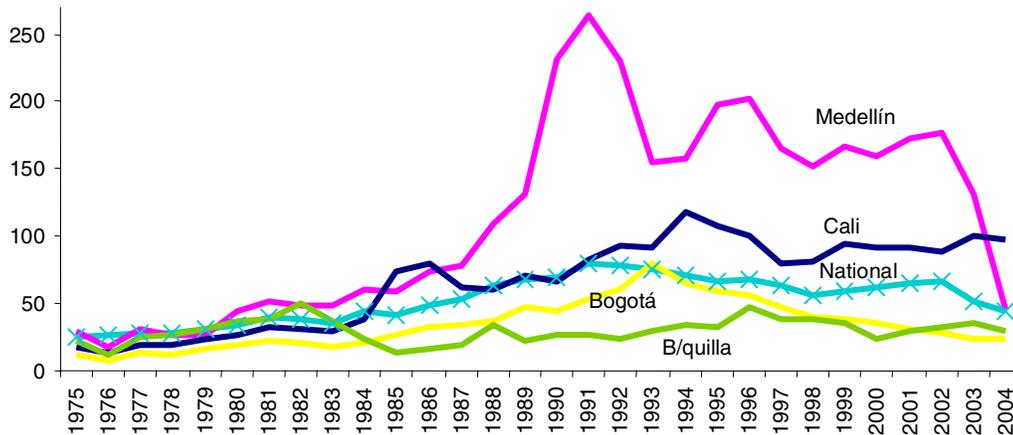
This article is divided in the following way: the first section is dedicated to examining homicide trends in Colombia and the changes seen in the country's judicial and criminal systems; the second section studies the various criminal codes (CC) that have addressed how to punish those who have committed homicide; the third section reviews current research that investigates which extra-legal variables generate disparities in sentence outcomes; the fourth section details the database and the methods used for this study; the fifth section provides the database's summary statistics; the sixth section unearths the relationship between the length of the sentence the defendant receives and the legal and extra-legal characteristics of the case; the seventh section discusses the relationship between whether the sentence is above the legal minimum set under the criminal code the case was adjudicated and the legal and extra-legal characteristics of the case; the eighth section is dedicated to discussing the statistical results; the ninth section reveals the limitations of the study; and the final section discusses the policy implications that may arise from the study's conclusions.

¹ In Colombia, some research has been done into crimes such as kidnapping, terrorism, embezzlement (Restrepo, Sánchez and Martínez, 2004), burglary (Sánchez y Núñez, 2001) and homicide (Rubio y Llorente, 2000) which identify those variables that affect the success or failure of criminal investigation into such crimes.

1. A HISTORICAL PERSPECTIVE OF HOMICIDE AND JUSTICE IN COLOMBIA

Thirty years ago, the homicide rate in Colombia topped 20 homicides per 100,000 inhabitants. Within the following decades, the homicide rate increased, reaching 80 homicides per 100,000 inhabitants during the early 1990s. Although the number of murders abated in the later half of that same decade, the rate was still over 55 homicides for every 100,000 inhabitants. Today, the rate in Colombia has dropped to 44 homicides per 100,000 inhabitants. Cities like Medellín and Cali reached rates of 264 and 118 murders per 100,000 respectively, and historically have been higher than murder rates found in Bogota and Barranquilla, (Graph 1).

Graph 1. Homicide rate per 100,000 inhabitants, 1975-2004



Source: National Police

The increasing presence of organized crime and the proliferation of drug traffickers coupled with the mounting ineffectiveness of the justice system² may possibly explain why the number of homicides has mushroomed. Statistics from the National Police databases reveal that between 1980 and 2000 more than 400,000 homicides were committed, 260,000 (65%) of which took place during the 1990s. Of the homicides committed in the 1990s, Bogotá reported 30,000 homicides; Medellín, approximately 35,000; Cali, more than 17,000; and Barranquilla registered below 4,000. Thirty four percent of all homicides documented in Colombia in the previous decade were committed in these cities.

Despite the increasing homicide rate, figures from both the National Police and *DANE* (The National Administrative Department of Statistics of Colombia) report that the Colombian court system has not been able to prosecute those who commit homicide at the same rate as people who report homicide. *DANE* details that between 1980 and 1998, approximately 265,000³ homicide cases opened even though 380,325 homicides were reported.

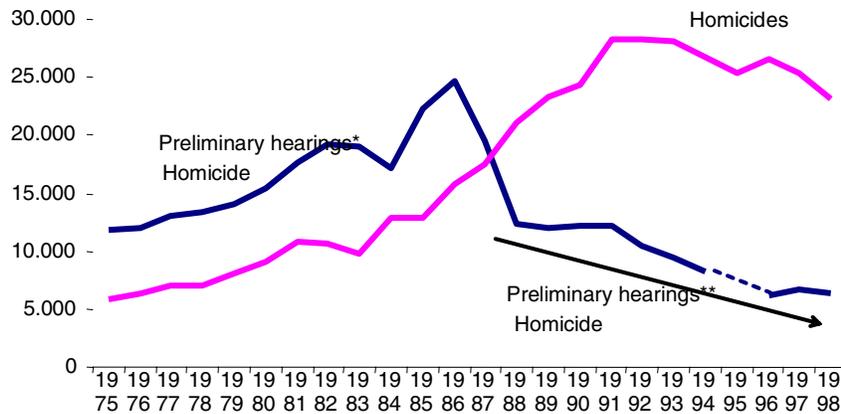
This ineffectiveness of the judicial system to cope with the escalating homicide rate is pictured in Graph 2 which shows the relation between the number of homicides reported and the number of preliminary hearings opened for homicide cases. At the start of our timeline, the number of opened preliminary hearings for homicide far exceeded the number of homicides reported. We attribute this gap to the possibility that more than one preliminary

² See Montenegro and Posada (1994) who synthesize various studies carried out on this subject.

³ This figure added the preliminary hearings reported to *DANE* between 1980 and 1998. As no information is available for 1995, the number for this year is an average of preliminary hearings carried out during 1994 and 1996.

hearing was opened for each reported murder. It may well be the case that more than one person may have been suspected for the crime committed. However, a shift occurs starting in 1987 when the number of preliminary hearings for homicide sharply drops in comparison to a noticeably increasing homicide rate. This can be explained by a change in the criminal code which states that a preliminary hearing could only be opened if a homicide offender was identified. We estimate that only 21% of all reported homicides reach the preliminary hearing stage in the timeframe examined.

Graph 2. Number of reported homicides and number of preliminary hearings opened for homicide cases, 1975-1998



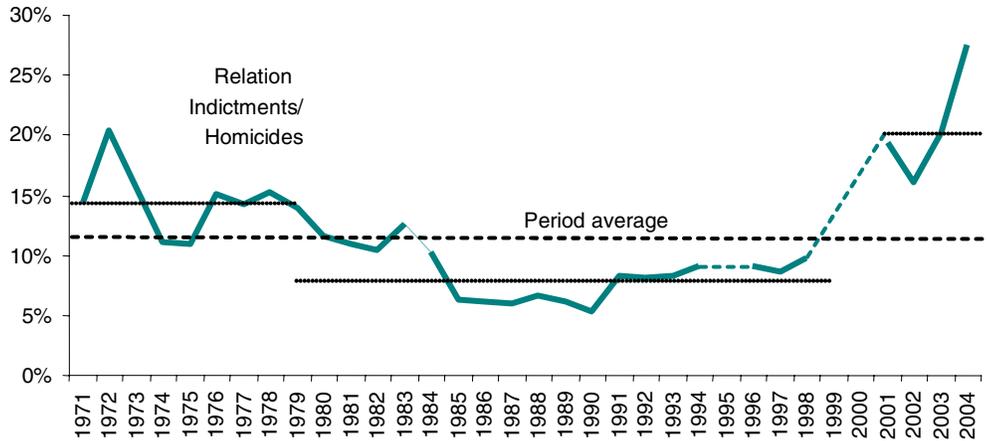
Source: DANE (Preliminary hearings) and the National Police (Homicides)

(*) Preliminary hearing opened with or without an offender identified, (**) Preliminary hearings opened with only one offender identified. * No data is available from 1994 – 1996.

When we turn our attention to the number of people charged for homicide, we notice that it remains relatively constant until 1990 when the average reaches over 1,000 indictments per year. In Graph 3, we illustrate that approximately a fifth of all individuals who committed homicide were sentenced over the timeframe displayed.⁴ This rise may be partially attributed to the creation of the Attorney General's Office in 1992.

⁴ Care should be taken when interpreting these results. According to our data, the time needed to process a report and sentence an individual is an average of a year and a half, with a standard deviation of 2 years. It is possible that some cases to this day are still being processed even though the offender was captured before the end of the timeframe examined.

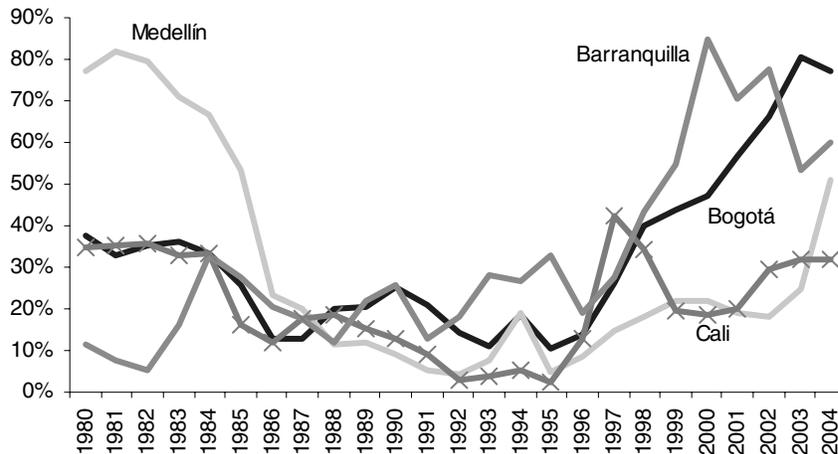
Graph 3. The relation between the number of indictments and the number of reported homicides, 1971-2004



Sources: DANE, the Attorney General's Office, (data 2001-2004), and the National Police. Authors' calculations. *No data is available for 1983, 1995, 1999 and 2000.

More specifically, the indictment/homicide rate dips significantly between 1984 and 1990, reflecting an ineffective criminal justice system. However, efforts by the Attorney General's Office raised the average of 21 indictments per 100 homicides committed between 2001-2004. Also, it is important to note that within the same period, the Attorney General's Office indicted almost 20,000 individuals for homicide, representing half of all homicide indictments during the last three decades.

Graph 4. Percentage of homicide offenders captured, 1980-2004



Source: *DIJIN* (Judicial Police Dept) of the National Police. Authors' calculations.

We also measure police effectiveness in controlling crime by examining capture rates of those alleged for murder. As seen in Graph 4, capture rates for homicide offenders suffered a significant decline toward the end of the 1980s and the beginning of the 1990s. During this period, fewer than 20% of those who committed homicide were captured. It is worth noting that capture rates in both Medellín and Cali fell to below a startling 4% between 1992 and 1993. Both low capture and indictment rates of individuals who committed homicide during these periods sent the message that carrying out such an egregious crime held no consequences and may have given impetus to the murder of other individuals.

All graphs reflect ineffective judicial and criminal systems from the 1980s to the beginning of the 1990s. After the creation of the Attorney General's office, an upturn in indictments and capture rates occurs. Within the last year, homicide rates have nearly returned to levels found during the early 1980s as observed in Graph 1.

2. A HISTORICAL EXAMINATION OF COLOMBIAN CRIMINAL CODES FOR HOMICIDE

The purpose of this section is to examine the legal framework which has determined the punishment, i.e. length of the sentence, for homicide committed in Colombia. We review Colombia's criminal codes beginning with the New Granada Code of 1837⁵, Colombia's first Criminal Code, when the punishment for the crime was originally determined.

In 1837, criminal lawyers of Colombia, then the New Granada Republic, wrote the first set of laws called the New Granada Code. The section referring to homicide was found in the Third Book, under the broad title of "Crimes and Offences against Individuals and their Sentences." Homicide is described as "...death that one man gives to another, without an order from legitimate authority..." and the individuals as "... he who kills another, not only with premeditation, but also with the following aggravating circumstances: cruelty, toxic or poisonous substances, with explosions or fire, with the aim of committing another crime or covering up the crime..." The sentence for homicide under this Code is between 4 and 10 years forced labor. However, when the homicide is classified as aggravated or considered an assassination, the law determines that "...the murderers shall be declared dishonorable and shall suffer the death penalty," (see table in Annex 1).

In 1873, the Criminal Code for homicide undergoes its first modification. The definition of aggravated homicide changes to that "...which is committed with premeditation and in cold blood..." Offenders who commit aggravated homicide receive a sentence of 8 years of imprisonment. In 1890, the Code is revised once again and alters the definitions of simple homicide, aggravated homicide, and assassination. Also, the sentence for simple homicide increases from 6 to 12 years imprisonment. The Code also reinstates the death penalty for those who commit assassination.

The Criminal Code is modified for the third time jointly with Law 109 of 1922. This code substantially changes the definition of simple homicide to indicate "...he who, with the intention to kill, causes the death of another...". Aggravated homicide is defined as he who commits murder against a direct relative or a civil servant. Assassination is defined as homicide committed against a relative, with premeditation, or by atrocious means. This definition is similar to that found in the Code of 1837. Sentences that corresponded to simple and aggravated homicides increase from 6 to 16 years, and 8 to 20 years, respectively. This particular Code abolishes the death penalty because it is declared unconstitutional under the Third Legislative Act in 1910. Consequently, offenders who were charged with assassination are punished with a fixed sentence of 30 years.

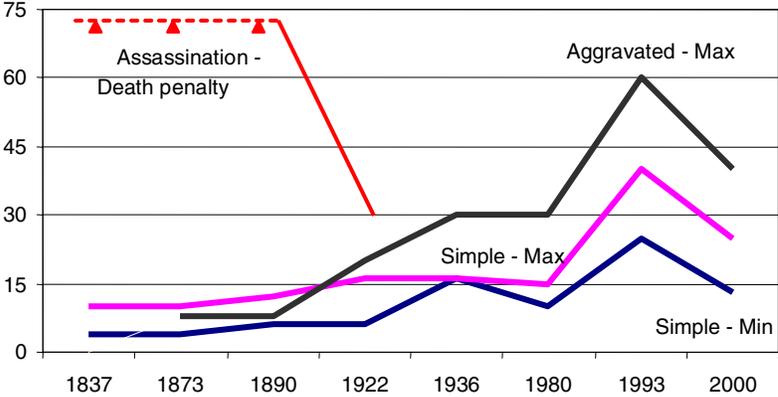
The Criminal Code changes in 1936 and modifies the definitions for homicides of differing severities. Offenders who commit simple homicide are sentenced for a fixed term of 16 years; likewise, an offender who is charged with assassination receives a sentence between 16 and 30 years. After 44 years, the Criminal Code transforms for a fifth time. The definitions of various types of homicide changes again, eliminating the term "assassination". The definition of simple homicide remains as "...he who kills another..." However, the definition of aggravated homicide broadens as Annex 1 reveals. This code reduces the sentence for simple homicide to between 10 and 15 years. The length of the sentence for aggravated

⁵ The information in this section was summarized by Elvira Maria Restrepo, Lawyer and Researcher in CEDE, Economics Faculty - University of Los Andes. Please review Annex 1.

homicide remains between 16 and 30 years. The Criminal Code is modified for the sixth time in 1993. In this Code, the sentences for simple homicide increase to between 25 and 40 years; sentences for aggravated homicide increase to between 40 and 60 years. These have been the highest recorded sentences in Colombia's legal history. Finally, Colombia's Criminal Code is revised for seventh time in 2000. Changes mainly consist of a reduction in the sentence for simple homicide: 13 and 25 years in prison, aggravated homicide: 25 - 40 years in prison.

In Graph 5 shows the minimum and maximum sentence lengths given for both simple and aggravated homicide according to the aforementioned criminal codes. We note several tendencies. Under the criminal codes prior to 1922, the penalty given for assassination is death. This severe penalty contrasts starkly against lighter penalties given for both simple and aggravated homicide. This contrast is reduced under Criminal Code of 1922. After the implementation of the Criminal Code in 1936, we see that maximum and minimum sentence lengths for both simple and aggravated homicide begin to increase, reaching a maximum of 40 years for simple homicide and 60 years for aggravated homicide with Law 40 of 1993. In 2000, sentences for homicide begin to decline for the first time in 160 years.

Graph 5. Maximum and minimum sentences for homicide according to the different Criminal Codes



Source: Criminal Codes of Colombia

Although this study places emphasis on simple and aggravated homicides, and assassination, we also examine unintentional homicide and attempted homicide. In the Criminal Code of 1837, unintentional homicide is described as involuntary homicide: he who kills another without having the intention of killing the victim, but with the intention of mistreating or harming him. The Criminal Code of 1980 defines unintentional homicide as that which "unintentionally kills another". This definition remains in the Criminal Code of 2000. The sentence issued for those who commit unintentional murder is a third to a half of the sentence length imposed for simple or aggravated homicide, depending on the severity of the crime committed. The Criminal Code of 1980 defines attempted homicide as an act that possesses all the characteristics of a homicide except that it has not occurred. Sentence lengths for attempted homicide cannot be lower than half of the minimum or higher than three quarters of the maximum sentence length indicated (for simple or aggravated homicide). The definition of attempted homicide and the length of punishment it warrants remain valid under the Criminal Code of 2000.

3. PREVIOUS LITERATURE ON DISPARITIES IN SENTENCING DECISIONS

A problem inherent in identifying sentencing discrimination based on non-legal variables is in the measurement of the "unobservable". To this day, researchers continue to find conflicting evidence when analyzing whether certain extra-legal factors influence sentence outcomes for comparable crimes. Often factors that are not deemed influential must interact with other variables for them to exert an effect. The network of various social and political dimensions at play during the investigative, pre-sentencing, and sentencing stages of a criminal proceeding may lead researchers to reach different conclusions. Nonetheless, efforts to pinpoint why sentencing disparities continue to appear despite the implementation of sentencing guidelines has broadened and enriched the debate to include variables that were previously not examined. We continue on this path by particularly analyzing certain extra-legal aspects that may exert an influence on sentencing discrimination within the Colombian context. We limit this literature review to the following factors: 1) contextual circumstances of the case and of the homicide, 2) victim characteristics, 3) defendant characteristics, and 4) the forensic evidence presented during the trial stage.

Contextual Factors

The propensity amongst researchers to focus on individual level characteristics in understanding departures from sentencing guidelines has limited our knowledge of macro-level forces that may affect if and how long a judge sends a defendant to prison. Depending upon where the criminal case is heard, different social, organizational, and political contexts could result in varying sentence outcomes, (Kautt, 2002). More research shows that courts, apart from their obligation to protect society and incapacitate individuals who have committed crimes, tailor their decisions contingent upon the power held within the court, the burden of court case load, and cultural underpinnings of the areas which they arbitrate, (Kautt, 2002, Johnson, 2005, Johnson, 2006). Johnson (2005) purports that court-level factors such as the size of the court as well as its case load exert a certain amount of influence on judicial departures from sentence guidelines even when controlling for individual case characteristics. Johnson (2006) extends his analysis by claiming that courts that are tied with prisons of greater capacity are more likely to incarcerate offenders who commit similar crimes. Broadening this topic to a more-macro level, research also suggests that judges weigh community-level factors such as crime rates when deciding if and how long a defendant should be imprisoned, (Wooldredge, 2007). Wooldredge finds that convicted felons of disadvantaged communities face a greater likelihood of being sent to prison. In a comprehensive study conducted by Fearn (2005), defendants were found to receive harsher sentences in communities where there were higher degrees of black/white income inequality, larger portions of fundamentalist residents, and greater incidents of violent crime. Due to the design of the U.S. judicial system where courts are divided by circuit, district, and federal lines, there is scant attention paid to other contextual factors such as the city in which the trial took place. This is of particular importance to Colombia because during the 1980s and the 1990s, organized crime, repeatedly linked to drug traffickers, paramilitary and guerilla groups, exerted influence on major Colombian cities. There is also little evidence that suggests that disparities may be a result of contextual differences of the homicide itself. Some of these contextual differences may be the number of witnesses at the crime scene or the location of the homicide itself.

Victim characteristics

Researchers have suggested that the demographic characteristics of the victim lead to different sentencing outcomes. A traditional focus within this topic has been to understand the impact of the interaction between the race of the victim and race of the offender on such outcomes. When African Americans defendants are tried for either sexual assault or

homicide against a white victim, they tend to receive stiffer punishments, (Spears & Spohn, 1996, Gleaser & Sacerdote, 2002).

Also, literature suggests that the race of both the offender and the victim may influence the judge's decision to impose the death penalty, (Zeisel 1981, Steiker and Steiker 1995, Kleck 1981, Wolfgang and Reidel, 1973, Baldus et al. 1998, Paternoster, 1984).

Other variables relating to the victim that may result in different sentence outcomes such as the victim's age, (Spears & Spohn, 1996, Baumer et al, 2004, Spears & Spohn, 1997), gender, (Curry et. al, 2004, Baumer et. al, 2004), and gender and race (Holcomb et al, 2004, Stauffer et. al, 2006), have shown conflicting effects. Differing crime types, geographical regions, and contextual situations may affect the statistical significance of victim characteristics in these studies.

There is a paucity of information that delves into whether the victim's education and employment status affect sentence disparity. Also, studies have failed to determine whether an armed victim may influence the sentence the defendant receives should he be proven guilty. These three factors are particularly important within the Colombian context due to the acute socio-economic differences within the population and the need for individuals to protect themselves in a country that was and is rife with violence.

Defendant Characteristics

There is a bevy of research that tackles defendant characteristics as a means of explaining why defendants who commit comparable crimes tend to receive different sentence outcomes. Scores of researchers have developed a much textured understanding of how factors, those that stand alone and those that interact with other variables, affect various stages of a criminal process.

The characteristics most studied in the American context are race and gender. Minority races such as African-Americans and Hispanic defendants have been shown to receive harsher punishments when compared to their white counterparts, (Steffensmeier et al, 1998, Schazenbach, 2005, Everett & Wojtkiewicz, 2002, Steffensmeier & Demuth, 2000). In regard to the offender's gender, conflicting evidence has been found. Keith (1991) discovered that sentence severity did not differ significantly by the gender of the offender, yet both Mustard (2001) and Rapaport (1991) find that male defendants receive substantially longer sentences. Factors such as if the judge adheres to gender stereotypes (Kruttschnitt, 1982) may explain why discrepancies in information exist.

There is also conflicting evidence that suggests that defendants of lower socio-economic status may receive different sentence outcomes, (Lott, 1987, Chiricos & Waldo, 1975, Miethe & Moore, 1985, Kempf-Leonard & Sample, 2001). Kempf-Leonard and Sample (2001) imply that the influence of the socio-economic status of the offender may only appear for certain crimes. Furthermore, they contend that the interaction between race and socio-economic status may place certain defendants at more risk than others. Zeisel (1981) also suggests that after assessing the social status of the victim, the probability of receiving a life sentence is higher for defendants of a lower economic status.

Research focused on Colombia may provide greater clarity in identifying which characteristics may influence the sentence defendant's receive and broaden the geographic scope of this research field.

Forensic Evidence

In Colombia, various public and private agencies are in charge of conducting forensic tests. Evidence presented in court is given significant weight to concrete the defendant's guilt or innocence. Despite the protocols each agency must follow to conduct forensic tests and present results, testimony that belies the agency's integrity may influence how the judge views the evidence it presents. In a court case, the prosecution and defense dispute the validity of evidence presented by the opposing side. Thus, a judge may become skeptical if such evidence is construed as disreputable, (Lynch & McNally, 1999) and as a consequence may not weigh this proof when making his decision. We find this issue of particular importance to Colombia because many of these institutions, which include the police and the office of the Attorney General, have been tainted with corruption and scandal. The extent to which this may affect sentence outcomes in Colombia is unknown.

The importance drawn to the validity of forensic evidence has been particularly highlighted by wrongful conviction in death penalty cases. Eye witness testimonies, blood tests, and fingerprints are some of the tests that are used in a criminal trial and are susceptible to human error. In an examination of the reasons why a wrong conviction may occur, Schehr and Sears (2005) place emphasis that evidence based on human judgment can endanger equality of all defendants before the law. Poor witness recall, planting of evidence by police, and the inclusion of evidence that lacks scientific merit suggest that not all forensic evidence is credible, (Schehr & Sears, 2005).

Furthermore, evidence points that certain professionals may be better in performing specific forensic tests. In a study about criminal psychological profiling, Kocsis (2003) contends that psychologists are better fit to carry out this particular task. In another study, Bartol (1996) found that the majority of police psychologists did not feel comfortable carrying out crime scene profiling and Homant and Kennedy (1998) concluded that Federal Bureau Investigation (FBI) trained profilers may execute the job better.

In our analysis section, we pay particular attention to tests carried out by different agencies and examine whether the influence they exert on our dependent variable varies. We also look into whether judges give more weight to certain forensic tests when they determine a defendant's sentence.

Overall contribution to literature on homicide research

This article makes a noteworthy contribution to literature because it addresses the reasons why a homicide offender may receive a sentence lower than the legal minimum set for the severity of the homicide. This investigation also expands the geographic limitations of homicide research by, for the first time, examining homicide disparities in Colombia.

4. METHODS

Design of the study

This cross-sectional study collected more than 500 variables pertinent to over 9,000 homicide cases of Colombia in the pre-sentencing and sentencing stages. Homicide cases that reached the sentencing stage were adjudicated under Criminal Codes 1980, 1993, and 2000. These variables measure: the contextual circumstances of the case and of the homicide, victim characteristics, defendant characteristics, and the forensic evidence presented during the trial phase. The information was retrieved from two distinct sources: 1) The Life Unit of the Attorney General's (AG) Office, and 2) the Criminal Court System.

Sample

The original sample includes 9,638 homicide cases⁶ that were opened during the pre-sentencing stage in the cities of Bogotá, Cali, Medellín and Barranquilla. A sub-sample of 3052 cases was created for defendants who received prison sentences from the judge presiding over the trial⁷. For this study, we carried out statistical analysis only on cases where the defendant was sentenced.

Estimation method used for Econometric Models

Due to the inclusion of more than 500 variables in our database, we develop the study's econometric models using a method developed by Wellford and Cronin (1999) to make our analysis more coherent and manageable. We use the subsequent steps to develop our econometric models:

1. The relationship between each independent variable and each of our two dependent variables was analyzed for their statistical significance before assigning each independent variable to one of our 4 vector variables: 1) contextual factors of the trial and of the homicide, 2) victim characteristics, 3) defendant characteristics, and 4) the forensic evidence presented during the trial.
2. Each vector variable was individually added to each econometric model. After this was done, the coefficients of the independent variables within each vector variable were analyzed for their statistical significance.
3. The coefficients of the independent variables found in Step 1 were then compared with the coefficients of the independent variables when grouped under each vector to check for their robustness and statistical significance. Only those variables whose coefficients were robust and statistically significant remained in the econometric models.
4. Finally, to assure that a statistically significant variable was not left out, they were individually added back into the model. If the variable was significant, it remained in the model, if not, it was removed.

Although a considerable amount of literature examining disparities in the criminal justice system focus on the sentencing stage of the criminal process, there is evidence that suggests that not all those who are convicted represent all defendants who enter the pre-sentencing stage, (Hagan & Parker, 1985, Zatz & Hagan, 1985, Wooldredge, 1998). To control for the effects of selection bias in our estimations, we use a probit model developed by Heckman (Heckman, 1977). By doing this, we re-estimate the parameters of the function that determines whether the defendant 1) will be sentenced, and 2) if he is sentenced, the length of this sentence and whether he will receive a sentence above than the legal minimum set for the severity of the homicide.

5. DESCRIPTIVE STATISTICS

Table 1 presents the descriptive statistics from the entire sample (defendants who enter the trial and investigative stages) and its sub-sample (defendants who were sentenced). It should be noted that we lacked information about some variables in the homicide cases we

⁶ Only homicide cases were examined when they were classified as: 1) attempted (simple/aggravated), 2) unintended, 3) simple, or 4) aggravated. Manslaughter (traffic accidents), mercy killings, infanticide and suicide are excluded.

⁷ Of the 9,638 homicide cases, 5,586 remained in the investigative stage – dismissals for lack of jurisdiction, suspensions, preclusions, acquittals and discontinuances - and 3,052 reached the sentencing stage.

examined. As a result, we notice fewer observations in certain variables. These differences are noted in Table 1.

Contextual Factors

Descriptive statistics show that roughly 36% of all homicide cases were tried in Medellin followed by Bogota. This result may suggest that judges who have expertise in adjudicating homicide cases are primarily located in these two cities. We also find that the smallest city in our sample, Barranquilla, presents the smallest percentage of court cases for defendants who have committed homicides. The percentage of court cases that took place in the cities sampled for this study stay relatively the same for our sub-sample.

More defendants from the sub-sample were tried under the Criminal Code of 1980 than the other two Criminal Codes (1993 and 2000) in question. The time span between the Criminal Code of 1980 and the Criminal Code of 1993 is longer than that between the Criminal Code of 1993 and Criminal Code of 2000 which explains why more defendants were prosecuted under the 1980 code. The ineffectual judicial system combined with weak law enforcement highlighted in the late 1980s to early 1990s may have contributed to the slump of homicide cases taken to court under the Criminal Code of 1993.

It is interesting to note that 85% of all of homicide cases in which a defendant was sentenced reported at least one witness was present at the scene of the crime, compared to only 65% of all homicide cases reviewed for this study. This finding asserts the notion that if a witness is present when the crime takes place, the criminal process may be more certain of the offender's guilt and therefore pursue measures that will lead to his incarceration. We also find that defendants in our sub-sample reported a higher percentage of being captured at the scene of the crime than defendants found in our main sample.

The majority of homicides took place on a public highway or street. This finding is particularly troubling for two reasons. First, it may be more difficult to capture the offender because the setting facilitates an easy escape, and second, efforts to contain the crime scene may be more difficult given that it is in an open environment. It may be also possible that people who pass the scene may destroy or contaminate evidence. Homicide cases found in both our sample and sub-sample reported less than 1 percent of all homicides took place where drugs were sold.

Victim Characteristics

We notice that the overwhelming majority of all homicide victims are male in our main sample and sub-sample, (89% and 87%, respectively). Roughly 30% of these victims had no education or had attained some primary education. Less than approximately 11% of all homicide victims belonged to any criminal organization. This number is surprisingly low given the high rates of organized crime found within the study's timeframe. Only 10% of homicide cases found in our parent sample reported whether the victim was armed when the homicide took place. Roughly half of victims reported to carry some sort of weapon revealed data about whether the weapon had a license and only 55% of the victims whose offenders were sentenced did have permission to carry their weapon of choice.

Over 55% of victims' bodies were retrieved from a hospital or clinic in our main sample and sub-sample. This is a positive result given that hospitals afford medical examiners and law enforcement agents the chance to conduct forensic tests necessary to identify the victim and the possible homicide suspects. Furthermore, it can be said that the public is shielded from the outcome of a gruesome act should the victim's body be transferred to a hospital.

Defendant Characteristics

Ninety five percent of all homicide offenders were male in our main sample. We find that this percentage stays constant in the sample of defendants that receive sentences. The average age of all homicide offenders was 29 years. Approximately, 18% of both defendants who did and did not reach the sentencing stage belonged to a criminal organization. Also, 20% of defendants who were given sentences had a previous criminal record compared to 17% of defendants who did not receive sentences.

More than 55% of all defendants who were sentenced were issued a public defender. This finding tells us two things. First, the majority of homicide offenders lack the financial means to hire private counsel which suggests that they are of low socio-economic status. Second, it may be probable that some homicide offenders did not receive good legal representation.

We find that the majority of the homicides are categorized as simple, (main sample: 59%; sub-sample: 57%). Offenders who attempted homicide account for less than 11% of all reported homicide cases. Unintended homicide was the least common and represented less than 5% in the sub-sample. There were no major percent differences in reported types of homicides between the sub-sample and parent sample.

Unfortunately, less than 10% of all homicide cases have recorded the aggravating circumstances of the case. Nonetheless, the most recorded aggravating circumstance of both samples show that the victim was defenseless or of inferior status. Other common circumstances were money, the cover-up of another crime, and whether the crime was committed against a relative. Aggravating circumstances such as acute cruelty, premeditation of the act, and complicity in the act of homicide represent less than 12% of the homicides reviewed for this study.

The most common motive for homicide was unknown, (27% for main sample). However, this percentage drops to 13% for defendants who were given sentences. It may be possible that an offender who has entered the sentencing stage may have been questioned with more vigor and therefore his motive determined. The second most common motive was a fight influenced by either or both alcohol and drugs (main sample: 16%, sub-sample: 21%) followed by theft in our main sample (13%), and revenge in our sub-sample (14%). During the study's timeframe, homicide due to theft rose significantly from 11% to 20%. Also we observe a decline from 20% to 7% in homicide which report a fight with either alcohol or drugs as the main motive from the beginning to the end of the study's timeframe.

Twenty three percent of all homicide offenders committed another crime at the same time as the homicide compared with 38% of sentenced offenders. However, less than 1% of all cases report that the defendant committed a sex crime, and fewer state that the defendant committed an act of terrorism. The most common crime committed in conjunction with homicide was the carrying of non-licensed weapon.

In the majority of cases, we find that the victim and the murderer knew one another, making it somewhat easier to identify the suspect. In the main sample, it was shown that two out of three homicides were committed by someone known to the victim; roughly 45% of the homicides were committed by an acquaintance, 8% by a friend, 4% by a relative, and 4% by their partner. Only in 33% of the homicide cases did the victim not know the offender. Percentages stay relatively the same in our sub-sample. Over the course of the study's timeframe, we notice a 6% increase in all recorded cases that report that no relation existed between the victim and the offender. This could signify that the cities in this study are suffering an increase in random violence.

We find that few defendants willfully turned themselves in (main sample: 11%; sub-sample: 8%) or plead guilty (main sample: 7%; sub-sample: 9%). In this study, we consider these acts as mitigating circumstances of the case.

Forensic Evidence

The fundamental reason for closing off the crime scene is to protect any evidence it contains. Roughly 10% of the study's homicide cases show that the scene of the crime was cordoned. In 72% of the study's cases, no such information was recorded. Despite the creation of the Attorney General's office in 1992, we still see that only 12% of all homicide crime scenes are secured.

Approximately one third of all homicide cases reported that a forensic test was conducted. As expected, an autopsy was the forensic test that was carried out the most in both samples. The second most reported forensic test conducted was a blood-alcohol test (49%). Interestingly, 50% of the victims were also administered a blood alcohol test. Other forensic tests frequently carried out were fingerprinting and blood tests. Psychiatric exams were reported to have been given to 6% of all defendants compared to 13% for those who received sentences.

In fewer than 11% of the proceedings in which the defendant was charged was the suspect identified in an ID parade. The use of this technique rose slightly between Criminal Codes 1980 and 1993 from 10 to 13%.

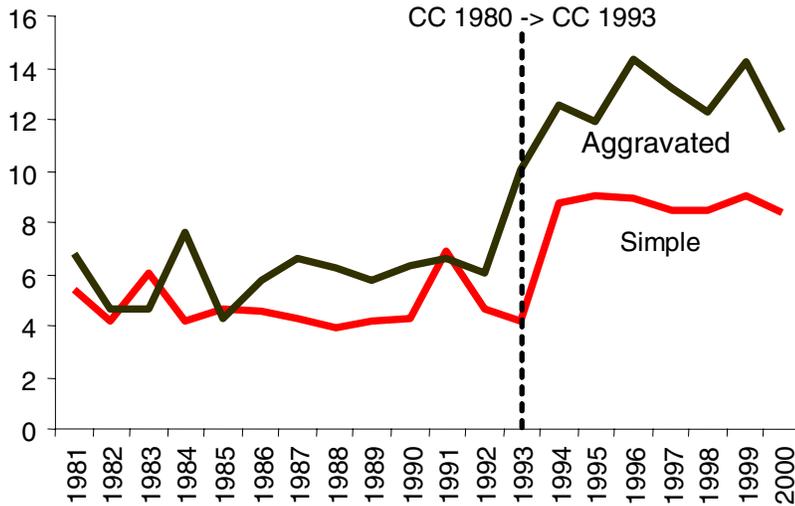
Table 1: Descriptive Statistics

	Whole Sample (n=9638)		Sub-sample (n=3042)	
	N reported	%	N reported	%
CONTEXTUAL FACTORS				
City of proceeding				
Bogota		25.78	32.73	
Medellin	9638	36.23	3052	31.78
Cali		19.68		24.41
Baranquilla		18.30		11.07
Trial adjudicated under Criminal Code				
1980			57.01	
1993			3052	39.06
2000				3.77
Proceeding began with report by:				
Police	9638	43.22	3052	43.74
Individual		20.49		23.59
Witnesses present	9638	65.85	3052	83.29
Captured at the scene of the crime	9638	17.39	3052	22.05
Location of homicide				
Residence of defendant		12.90		14.81
Public highway, street		56.56		52.59
Comercial establishment	9638	4.16	3052	11.07
Bar		8.67		5.34
Venue where drugs are sold		0.04		0.36
VICTIM CHARACTERISTICS				
Nb. of victims (including would-be victims)	9638	0.95	3052	0.93
Sex (male = 1)	8238	89.76	2757	87.52
Level of education				
None		4.03		5.17
Primary	8333	26.41	2767	27.94
Status of employment				
Unemployed	8333	8.88	2767	6.22
Belonged to a criminal organization	8333	10.28	2767	7.01
Where victim was recovered				
Hospital		58.55		64.43
Public highway, street		21.93		16.67
Bar	7109	2.22	2429	3.01
Place of recruit for illegal armed groups		0.35		0.12
Vehicle		1.17		0.95
Victim carrying firearm				
Licensed	1202	14.42	307	11.10
	523	45.32	122	55.74
THE DEFENDANT				
Identified by whom				
Witness		44.89		58.54
Victim's relative	7814	13.00	3051	8.55
DJIN		2.21		2.10
Attorney General's Office - JIC		0.72		0.69
Belonged to a criminal organization	7880	18.07	3052	17.33
Previous criminal record	7813	16.81	3051	20.29
Issued a public defender			3052	57.07
DEFENDANT Cont				
Defendant - Victim relationship				
Family		4.20		5.18
Friend		7.73		9.11
Partner	7813	4.33	3051	5.97
Acquaintance		45.44		47.43
Stranger		32.68		28.15
Motive of homicide				
Fight w/ alcohol		16.05		21.59
Fight w/o alcohol		10.94		13.37
Passion		3.44		5.80
Drug	9163	0.39	3052	0.36
Theft		13.61		11.57
Interfamily violence		1.64		2.59
Revenge		12.45		14.52
Unknown		27.44		13.53
Type of homicide				
Simple		58.77		56.79
Aggravated	8157	27.06	3048	28.05
Unintentional		3.32		4.33
Attempted		10.86		10.83
Aggravating circumstances				
Family member		11.38		11.81
To aid/cover up a crime		13.48		14.86
Money	1046	14.24	821	14.74
Victim - defenseless		44.07		45.07
Cruelty		5.64		4.99
Premeditated act		3.35		3.29
Under the influence of alcohol	7821	4.42	3052	6.55
Turned himself in	7813	10.76	3051	8.49
Escaped after capture	6292	1.99	2582	4.11
Homicide concurred w/ other crimes				
Theft	456		260	
Possession of illegal weapons	1119		674	
Sexual Crimes	12		7	
Terrorism	10		8	
Personal Injury	305		136	
Plead guilty			3052	8.91
FORENSIC EVIDENCE				
Fingerprints taken				
Medicina Legal	669	8.56	287	10.54
Attorney General's Office	205	32.49	89	33.33
	174	27.58	50	18.73
Fingerprinting of corpse				
Medicina Legal	435	1951	212	26.50
Planimetry				
CTI		21.86		18.05
Attorney General's Office	1107	13.55	410	14.63
Blood alcohol levels	7842	48.70	2732	49.38
Psychiatric exam	7806	6.12	2722	13.62
ID parade	7796	7.58	2717	11.19
Secret witness testimony	7644	0.18	2727	0.26

Sentences for Homicide Offenders

Differences in average sentence lengths fluctuate between 5 and 13 years over the study's timeframe for both simple and aggravated sentences. Since 1993, sentence lengths have increased for the aforementioned types of homicides, contrasting against lighter sentences given under the CC of 1980.

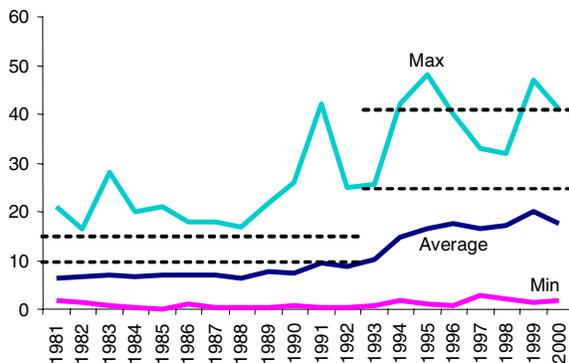
Graph 6. Standard deviation of sentences for simple and aggravated homicide under Criminal Codes 1980 and 1993.



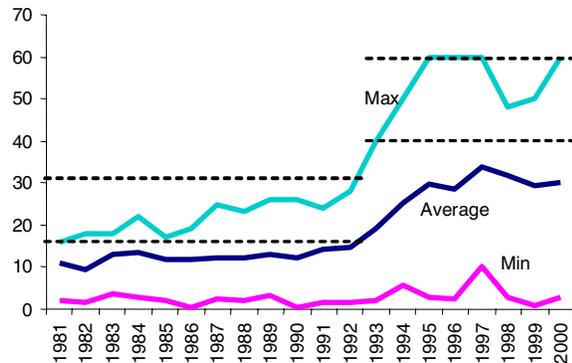
Source: CEDE, 2004

Graph 7. Average sentence length (in years), maximum sentence, and minimum sentence handed down under Criminal Codes 1980 and 1993

A. Simple homicide



B. Aggravated homicide

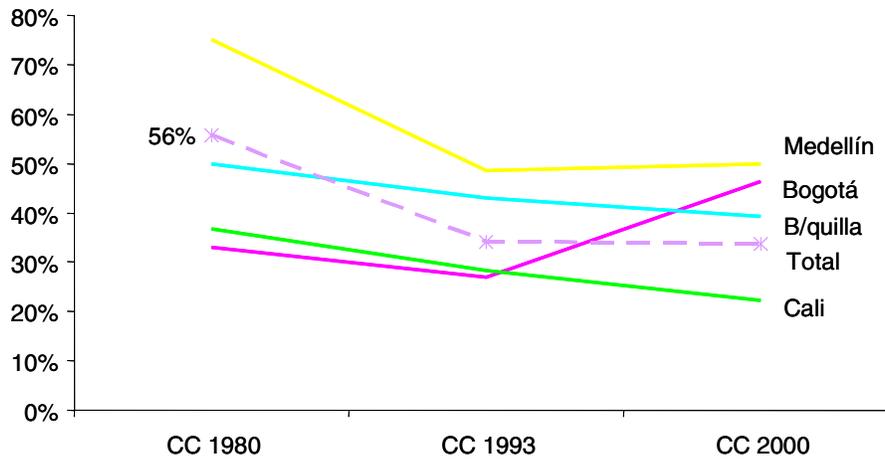


Solid lines show the maximum, average, and minimum sentences given by year. The dotted lines indicate the maximum and minimum sentences established by Criminal Codes 1980 and 1993.

Source: CEDE, 2004

As observed, the average sentence length for homicide is fourteen and a half years. Disaggregated, we find that the mean sentence for simple homicide is 12.17 years and the mean sentence for aggravated homicide is 22.82 years. Both sentence lengths fall below the minimum sentence set for the criminal codes under examination.

**Graph 8. Percentage of sentences below the minimum
(% of total sentences per city)**



Source: Sample of homicide files – CEDE, 2004

On average, 40% of both simple and aggravated homicides sentences fall below the legal minimum set for each of the three Criminal Codes examined. However, we find that the number of sentences that are lower than those codes legal minimums has decreased. Fifty six percent of the sentences passed under the Criminal Code (CC) of 1980 were below the legal minimum. Under the CC of 1993, only 34% of homicide sentences did not surpass the minimum. From 1980 to 2000, Medellín shows the highest percentage of sentences below the minimum (66%).

6. FACTORS THAT DETERMINE THE LENGTH OF SENTENCE FOR HOMICIDE

The severity of the sentence, measured in years, can be shown by the following model:

$$A_i = f_i(X_i, V, E, G) \quad (1)$$

A_i represents the length of the sentence imposed by the judge I , measured in years; X_i is a vector variable that represents the contextual factors of the trial and of the homicide of case, i ; V is the vector variable that represents victim characteristics; E is a vector variable that represents defendant characteristics; and G is a vector variable that represents the forensic presented during trial and who carried out the tests. Equation (1) is estimated using the study's sub-sample of defendants who have been given homicide sentences.

Results

We highlight both the legal and extra-legal variables that are shown to influence the severity of sentence handed to the offender and compare their quantitative and statistical significance to results found in our regression that controls for potential selection bias.

Of the 32 independent variables examined in this model, 25 of them yielded positive coefficients. We note that defendants, in part, are evaluated based on the extra – legal dimensions of the case. Variables, such as where the victim's body was retrieved and or the

city in which the trial took place, influence the severity of the defendant's sentence. Even though articles within the Colombia Criminal Codes allow judges to enter particular extra-legal features when making their sentence decisions, we disregard this premise and consider variables legal or extra-legal based on legal theory.

Contextual Factors

To control for unobservable differences between cities in which homicide trials took place, we included a series of dummy variables that represent each city. Results show that sentences handed down in Bogota increase by roughly one year whereas sentences handed down in Medellin decrease by 2.87 years. This finding is particularly striking because Medellin recorded the highest homicide rate of the four cities analyzed in this study. A bold hypothesis would suggest that Medellin judges may have been intimidated by organized criminal groups that were prolific during the eighties and nineties.

As expected, sentence severity for those who commit homicide vary under each of the three examined Criminal Code (CC). Table 2 reports that if the trial took place under Criminal Code 1993, under which the harshest punishment was set, sentences increased by 8.8 years on average. Diverting our attention to the length of the sentences given out under CC 2000, we find that sentences are roughly 4 years less than sentences issued under the 1993 criminal code. Both figures are compared to sentences given under the Criminal Code of 1980, the most lax criminal code under examination.

We find that judges tend to lower the length of the sentence by 1.2 years, should the homicide take place in a shopping center. This result contradicts Auerhahn's (2007) conclusion positing that the situational context of the crime has no influence on the length of the sentence. Despite the significance of this finding, it can not be supported by logic or theory.

Victim Characteristics

Results show that for each individual murdered by the offender, his sentence rises by an average of 4.01 years. One of the theses purported by Gleaser and Sacerdote (2000) suggests that judges may be more inclined to keep the defendant in jail, especially one who has committed multiple murders, because he may face a higher chance for recidivism, thus putting society in danger in the future.

It is interesting to note that a defendant's sentence decreases by 1.03 years if the victim's body was removed from the defendant's house; likewise, the defendant's sentences increases by approximately two years if the body of the victim was retrieved from an establishment that sells alcohol. Given that the defendant's house is a considered private place, away from the public eye, the judge may view the defendant more leniently because he protected the community from seeing such an egregious act take place. In the same line of thought, a judge may look more unfavorably towards a defendant whose victim was found in a place accessible to the general public. In theory, the location where the homicide took place and where the victim's body was removed should not be associated with the sentence decision, yet our results prove otherwise.

Defendant Characteristics

More than half of the independent variables which were found to show a quantitative and statistically significant association with the severity of the sentence are related with the characteristics of the defendant and how and why he committed homicide. Of the 22 variables directly identified with the offender, 18 yielded positive coefficients, and four yielded negative coefficients.

As we had expected, the defendant's sentence increases if he belongs to a criminal group or organization, had a criminal record, or had committed another crime (sexual, an act of terrorism, theft, or personal injury) at the same time of the homicide. All of the previously mentioned factors are considered legal characteristics and should determine the severity of the defendant's sentence. Of the aforementioned variables, results convey that the length of the sentence is lengthened by roughly 9.5 years if the defendant committed a sex crime in conjunction with the homicide. Other crimes such as acts of terrorism and theft that are perpetrated alongside the homicide also lengthen the defendant's sentence by 7.39, and 1.45 years, respectively. It is apparent that judges found in this sample consider those who carry out sex crimes jointly with homicide should be judged more severely than those who carry out acts of terrorism. We can explain this phenomenon by referring to Colombia's Criminal Codes which dictate that crimes that violate sexual freedom or human dignity should receive greater penalties than crimes committed against the state.

Table 2 also testifies a positive relation between sentence severity and the defendant's motive for homicide. The defendant's sentence increases if his or her motive is the following: inter-family violence, 1.53 years; revenge, 1.75 years; drugs, 4.11; theft, 2.28; and if his motive was unknown, 1.53 years. Evidence suggests that if the defendant's motive was driven by drugs, his sentence increased the most when compared to other motives.

We also notice the severity of the crime also exerts an influence on the severity of the sentence that the defendant receives. Offenders who commit aggravated homicide receive a sentence four years higher than those who commit simple homicide. In other words, we find that a defendant's sentence increases by 3.21 years if he committed simple homicide, and 7.22 years if he committed aggravated homicide. Those who attempt to murder or commit unintentional homicide receive lower sentences, as stipulated by the Criminal Code. Aggravating circumstances of the crime, considered as variables found within legal parameters such as whether: 1) the defendant covered up another crime, 2) money was involved, 3) the victim was considered defenseless or of inferior status, 4) or the defendant acted with particular cruelty, also tend to lengthen the sentence given, particularly in the last example, (6.17 years).

Table 2. The relation between the length of the sentence for homicide (in years) and the legal and extra-legal characteristics of the case: Ordinary Least Squares (OLS) estimations.

	coef	t	P> t		coef	t	P> t
CONTEXTUAL FACTORS				THE DEFENDANT CONT.			
City where the trial took place				Type of homicide			
Bogota	0.97	3.2	0.001	Simple	3.21	7.26	0.000
Medellin	-2.87	-9.06	0.000	Aggravated	7.22	13.82	0.000
Criminal Code				Aggravating circumstances			
Trial under CC of 1993	12.07	43.06	0.000	To aid/cover up crime	4.77	5.98	0.000
Trial under CC of 2000	8.33	12.1	0.000	Money	5.98	8.34	0.000
Place of homicide				Victim - Defenseless	5.04	10.26	0.000
Comercial establishment	-1.07	-1.97	0.049	Cruelty	6.17	5.50	0.000
THE VICTIM				Turned himself in	-1.67	-3.74	0.000
No. of victims	4.01	13.03	0.000	Concurrence w/ other crimes			
Where victim was recovered				Sex crimes	9.38	3.66	0.000
Residence of defendant	-1.03	-1.85	0.064	Personal injury	1.19	2.02	0.044
Bar	2.05	2.55	0.011	Terrorism	7.39	3.00	0.003
THE DEFENDANT				Theft	1.45	2.22	0.027
Identified by:				Plead guilty	-6.06	13.29	0.000
Victim's relative	-1.01	-2.30	0.022	THE INVESTIGATION			
DIJIN	-2.00	-2.33	0.020	Planimetry done by:			
Belonged to a criminal org.	1.25	3.50	0.000	CTI	1.804	2.23	0.026
Previous criminal record	0.74	2.36	0.018	DA's office	4.32	3.52	0.000
Motive of homicide				ID parade	1.72	4.15	0.000
Interfamily Violence	1.53	1.93	0.054	Constant	0.68	1.51	0.130
Revenge	1.75	4.73	0.000				
Drugs	4.11	2.00	0.046	Source	SS	df	MS
Theft	2.28	3.85	0.000	Model	23976	32	7493
Unknown	1.53	4.08	0.000	Residual	136641	3019	45
				Total	376438	3051	123
				No. of obs = 3052	R-squared = 0.6370		
				F(32, 3019) = 165.57	Adj. R-squ = 0.6332		
				Prob > F = 0.0000	Root MSE = 6.7276		

Mitigating circumstances also wield a certain amount of influence in determining sentence severity. We find that if the defendant pleads guilty to yield the greatest negative coefficient, a judge lowers the defendant's sentence by over 6 years. Equally notable, if the defendant turns himself in, his sentenced is reduced by nearly 2 years. Both results purport the idea that judge considers such actions as an admission of guilt on behalf of the defendant (Neinstadt et. al, 1999).

However, we also discover that how the defendant is identified is associated with the length of the defendant receives. If the murderer is identified by a relative of the victim or by the *DIJIN*, the length of the sentence becomes shorter. In essence, such a factor should not relate with the severity of the sentence and leaves us perplexed why it holds statistical significance.

Forensic Evidence

In theory, the agency that conducts the forensic tests for the case should not influence sentence severity. We find that two variables, ID parade and planimetry, were found to be statistically significant and positively associated with the severity of the sentence, thus validating the idea that the judge gives more weight for these types of forensic evidence. This

also shows us that the judge becomes more confident of the offender's guilt should this type of forensic evidence be presented.

Results report that if a planimetry is conducted by the AG's office, the defendant's sentence increases by roughly 4 years, whereas if it were performed by CTI, the sentence increases by 1.8 years. Such a difference in results intimates that the judge may be more certain of the conclusions obtained by the AG's office compared with those of CTI. Likewise, we see that if an ID parade was conducted, the defendant's sentence increases by 1.72 years. One could imagine that by carrying out this criminal check, the investigation is able to pin-point the individual who committed the crime, and eliminate those who are innocent.

In sum, our evidence does show that several extra-legal factors may sway the length of time the defendant is imprisoned. However, we must note that the results show the judges weigh more heavily legal variables more than extra-legal variables when making their sentencing decisions. This can be seen by, for example, examining the coefficients of variables that describe the aggravating circumstances of the case in comparison to variables that describe what forensic tests were carried out and by whom.

Some of the most noteworthy findings are the following: if the defendant committed a sex crime or an act of terrorism in conjuncture with the homicide, or if the homicide was committed with a particular sense of cruelty, the defendant's sentences increases the most in years in comparison with other examined factors. We also identified sundry variables that should not ultimately influence the decision of the judge. Such variables are: 1) the individual or authority that identified the defendant, 2) the agency who carried out the specific forensic tests, 3) where the homicide took place, and 4) site from which the victim's body was removed.

Heckman Probit

After analyzing results from our first econometric model, we hypothesized that selection bias may be present having seen its existence in a comprehensive study about sentence disparities, (Albonetti, 1991). As a result, we examined certain factors related to the defendant or victim that we thought may influence the probability that the defendant would receive a sentence. We examined over 10 variables. The corrected estimations can be found in the Table 3.

Upon the start of our analysis, we find no major changes in the coefficients of our variables; all remain either positive or negative. Yet, when we shift our attention to the statistical significance of our variables, we do notice that if the homicide took place in commercial establishment, its statistical value is lost. Results using the Heckman probit show us that this relationship is not statistically significant which validates our interpretation that the location of the homicide should not influence sentence severity.

The Heckman probit model informs that two factors shape whether the defendant will be sentenced: if the accused is assigned a public defender or if the defendant is male.

The first factor mentioned buoys the ever-present debate in the United States that questions the quality of attorneys hired by the government to defend those who are of typically low socio-economic status. Though we have no qualitative evidence from Colombia that would suggest that Colombian public defenders are of poor quality, our evidence does however suggest that having government council jeopardizes the possibility that the defendant will receive fair representation and a just trial.

Secondly, we find that being male increases the probability that the defendant will be sentenced. This result supports the notion that women are viewed more leniently by the

justice system during the pre-sentencing stage. In a review of literature, Griffin and Wooldredge (2006) summarize various theories why women may receive preferential treatment: expected gender roles, (Kruttschnitt, 1982); chivalry thesis, (Belknap, 2001); and the paternalism theory, (Belknap, 2001).

Table 3. The relation between length of sentence for homicide (in years) and legal and extra-characteristics of the case: Heckman probit.

	coef	t	P> t		coef	t	P> t
CONTEXTUAL FACTORS				THE DEFENDANT CONT.			
City where the trial took place				Type of homicide			
Bogota	1.03	3.2	0.001	Simple	3.23	7.80	0.000
Medellin	-2.75	-9.06	0.000	Aggravated	7.75	14.57	0.000
Criminal Code				Aggravating circumstances			
Trial under CC of 1993	12.73	43.06	0.000	To aid/cover up crime	4.77	6.03	0.000
Trial under CC of 2000	8.57	12.1	0.000	Money	5.73	7.99	0.000
Place of homicide				Victim - Defenseless	4.90	10.01	0.000
Comercial establishment	-0.91	-1.97	0.093	Cruelty	6.28	5.59	0.000
THE VICTIM				Turned himself in	-1.68	-3.83	0.000
No. of victims	4.19	13.59	0.000	Concurrence w/ other crimes			
Where victim was recovered				Sex crimes	9.25	3.66	0.000
Residence of defendant	-0.99	-1.81	0.071	Personal injury	1.16	1.99	0.046
Bar	2.15	2.71	0.007	Terrorism	6.65	2.71	0.007
THE DEFENDANT				Theft	1.38	2.12	0.034
Identified by:				Plead guilty	-6.22	-13.78	0.000
Victim's relative	-1.09	-2.50	0.012	THE INVESTIGATION			
DIJIN	-2.25	-2.66	0.008	Planimetry done by:			
Belonged to a criminal org.	1.31	3.72	0.000	CTI	1.804	2.24	0.025
Previous criminal record	0.71	2.31	0.021	AG's office	4.22	3.48	0.000
Motive of homicide				ID parade	1.66	4.06	0.000
Interfamily violence	1.78	2.26	0.024	Constant	6.54	10.64	0.000
Revenge	1.78	4.85	0.000	Selection Bias			
Drugs	4.19	2.06	0.040	Issued a public defender	0.06	2.59	0.009
Theft	2.45	4.16	0.000	Sex of Defendant	0.15	2.55	0.011
Unknown	1.44	3.91	0.000	(1=male)			
				Athro	-0.99	-11.48	0.000
				Chi2(1)=20.28	Prob>chi2=0.0000		
				No of obs=7813	Wald chi2(32)=4532.89		
				Censored obs=4762	Prob>chi2=0.0000		
				Uncensored obs=3051			

7. PROBABILITY OF PASSING A SENTENCE HIGHER THAN THE LEGAL MINIMUM

We use a probit model to estimate the probability that the defendant will be issued a sentence higher than the legal minimum⁸ set for the severity of the crime:

$$P_i = f_i(X_i, V, E, G) \quad (2)$$

⁸ We define "legal minimum" as the minimum sentence length the defendant can receive according to the Criminal Code under which the case is tried.

P_i represents the probability that the defendant i will be given a sentence higher than the legal minimum. X_i is a vector variable that represents the contextual factors of the trial and of the homicide of the case i ; V is a vector variable that represents victim characteristics; E is a vector variable that represents defendant characteristics; and G is a vector variable that represents the forensic evidence of the case and who carried out the tests. In this particular model our dependent variable is equal to one if the defendant was given a sentence higher than the legal minimum for the severity of the crime, and zero if the contrary occurs.

We also test whether selection bias influence our coefficients by applying the Heckman probit after running our original probit model.

This model analyzes the extent to which legal or extra-legal characteristics exercise an influence on the probability that the accused will be sentenced above or below than the legal minimum set for the severity of the crime. Surprisingly, we find that roughly 37 percent of all defendants received a sentence higher than the legal minimum.

Table 4 details the factors that affect this likelihood. We assume that if the variable in question yields a negative coefficient, the more likely the defendant is to receive a sentence that is below the minimum. Similarly, should the coefficient be positive, the more likely the defendant will receive a sentence above the minimum. The probability increases or decreases depending upon the size of the coefficient. In sum, we found 29 statistically significant variables, 20 of which yield positive coefficients and nine of which yield negative coefficients, to determine the probability of the defendant to receive a sentence above the minimum.

Contextual Factors

Similar to our results found in our first econometric model, we found that judges in Medellin were 12 percent less likely to issue a sentence above the legal minimum. This further strengthens the assumption that judges feel that they lack security to hand out a legally just sentence, given that Medellin at this time had the highest homicide rate in the country. In contrast, defendants who were tried in Bogota or Cali are more likely to receive a sentence above the minimum (12%, and 8%, respectively).

Equally, this probability increases by 19% when the defendant is tried under the Criminal Code of 1993 and 32% under the Criminal Code of 2000.

When turning our attention to the contextual factors of the homicide itself, we found one variable to be of statistical significance. If the homicide took place in a shopping establishment, the defendant was 15% less likely to receive a sentence above the minimum. This result, similar to the one found in our first uncorrected econometric model, is difficult to interpret given no logical argument can support it. Nonetheless, this factor should have no effect on our dependent variable.

Victim Characteristics

We find that judges factor in some extra-legal characteristics of the victim when they make their decision. This is made apparent when we look at the relationship between the victim's education and our dependent variable. Results convey that if the victim has no education, the probability of the sentence being above the minimum decreases by 6 percent.

It is also evident that if the victim was armed the defendant's probability that he receive a sentence above the legal minimum increases by 31 percent. However, if the homicide was committed with firearm, the chances that the defendant will receive a sentence higher than the minimum decreases by 11 percent.

Defendant Characteristics

Of the variables found to relate with our dependent variable, nine are directly associated with the defendant and how he committed the murder. Five legal variables have a positive relation with the probability that the sentence will be higher than the minimum: 1) if the defendant belonged to a criminal group or organization, 2) if the defendant had a previous criminal record, 3) if the defendant committed a crime in conjuncture with the homicide, 4) if the defendant's motive was unknown, and 5) if he escaped after being captured. The probability that the defendant will receive a sentence higher than the legal minimum increases the most if the defendant committed the homicide with an acute sense of cruelty.

Variables that decrease this probability were also identified as the following: 1) whether the motive for homicide was driven by or without alcohol and drugs, 2) if the defendant was a friend of the victim, and 3) if the defendant turned himself in. Although we can argue that the act of a defendant who turns himself in may be considered a mitigating circumstance by the judge, the first two factors elude a logical explanation why the defendant's probability of receiving a sentence higher than legal minimum decreases.

It was also shown that the probability of passing a sentence over the minimum decreases when the homicide is characterized as simple or aggravated. It is probable that judges may view the set minimum to be stringent and therefore may be reluctant to issue a higher sentence or may fear negative repercussions should they serve a sentence at or above the legal minimum.

In contrast, if the judge assigned a government lawyer to the defendant, his probability of receiving a sentence above the minimum increases. Again, we could contend that public defenders lack proper training, and perhaps experience, to defend his client. Studies that support our thesis that defendants who are represented by government attorneys will have a greater chance of being sentenced may also support our theory that these same defendants will have a greater probability of receiving a sentence higher than the legal minimum.

If indeed a defendant's council influences the judge's decision, we can only assume that the socio-economic status may be an underlying factor that controls the type of defense he is able to acquire. According to Lott (1987), Zeisel (1981) and Clarke, Freeman and Koch (1976), the higher the economic status of the defendant, the shorter the sentence he will receive. Despite the fact that our database lacks information about the socio-economic status of the defendants, there is information on the type of defense he had which could serve as a proxy for his socio-economic status. In short, a defendant, of the financial means to hire proper defense, will have a greater chance of 1) not be sentenced, and 2) if he is sentenced, he will receive a sentence higher than the minimum.

Forensic Evidence

Contrary to expectation, we continue to see that the manner in which the investigation was conducted influences the judge's decision. Although we find fewer variables under this category to influence whether the sentence is above the minimum compared to the number of variables found to influence the length of sentence the defendant receives, we find that ID parade holds to be statistically significant; a defendant is 8% more likely to receive a sentence higher than the legal minimum if he is identified by an ID parade.

Heckman Probit

Interestingly, we find that selection bias did not have an effect on results from our second econometric model. We tested the 10 variables that were used to examine the existence of selection bias in our first econometric model and found none to influence the likelihood that a defendant would be selected to receive a sentence higher than the minimum set for the severity of the homicide.

Table 4. Probability that a defendant receives a sentence higher than the legal minimum set by the criminal code under which the case was tried: Probit model.

	dF/dx	z	P> z		dF/dx	z	P> z
CONTEXTUAL FACTORS				THE DEFENDANT CONT.			
City in which trial took place				Type of Homicide			
Bogota	0.11	3.51	0.000	Simple	-0.07	-2.07	0.039
Medellin	-0.12	-3.73	0.000	Aggravated	-0.32	-9.45	0.000
Cali	0.08	2.43	0.015	Aggravating Circumstances			
Criminal Code				Interfamily violence	0.33	5.46	0.000
Criminal Code 1993	0.19	9.19	0.000	To aid/cover up a crime	0.46	8.52	0.000
Criminal Code 2000	0.32	6.22	0.000	Money	0.34	6.13	0.000
Where homicide took place				Victim - Defenseless	0.37	8.68	0.000
Comercial establishment	-0.15	-4.12	0.000	Cruelty	0.54	10.59	0.000
THE VICTIM				Escaped after being captured	0.13	2.48	0.013
Number of victims	0.20	6.80	0.000	Turned himself in	-0.11	-3.35	0.001
Education				Concurrence with other crimes			
No education	-0.06	-3.25	0.001	Theft	0.25	5.89	0.000
Homicide committed w/ firearm	-0.11	-3.25	0.001	Carrying illegal weapons	0.27	10.88	0.000
Victim found w/ licensed firearm	0.31	4.05	0.000	THE INVESTIGATION			
THE DEFENDANT				Other tests			
Issued a public defender	0.04	2.13	0.030	ID Parade	0.08	2.41	0.016
Belonged to a criminal org	0.08	3.03	0.002	Constant			
Had previous criminal record	0.09	3.67	0.000	Probit Estimates	No. of obs = 3052		
Relation with victim					LR Chi2 (29) = 992.24		
Friend	-0.03	-1.96	0.050	Log likelihood =	Prob>Chi2 = 0.0000		
Motive of Homicide				-1635.3604	Pseudo R2 = 0.2466		
Fight w/ alcohol & drugs	-0.06	-2.48	0.013				
Fight w/o alcohol & drugs	-0.06	-2.20	0.028				
Unknown	0.08	2.90	0.004				

8. DISCUSSION

Results from this study show that homicide sentence disparity found in Colombia is partially based on extra-legal factors that should not, in theory, sway the decision of the judge. Our findings also confirm that the problem of judicial discretion is not limited only to the United States but transcends international borders which complements a similar and recent study conducted by Auerhahn (2007) who examines sentence disparities using homicide data from the U.S.

Consistent with Kautt (2002), the place where the trial takes place may jeopardize the uniformity of sentence outcomes. She finds that the focus of extra-legal characteristics (gender, sex, race, etc), limits our understanding of how jurisdictional characteristics may contribute to differences in sentence lengths. Such disparities may be a result of the political, social, and organizational context of that particular court, (Kautt, 2002). For example, courts in Medellin may have lowered sentence lengths at a higher rate than that of Bogota to not disrupt the balance of power held by prevailing criminal organizations during the 1990s. In

addition, Kautt (2002) contends that “work groups” within different courts that seek to dispose cases may source sentence disparities found across the cities in our sample.

Victim characteristics also showed a certain effect on both the length of the sentence received as well as the probability that the defendant will receive a sentence above the legal minimum. In research conducted by Baumer, et. al (2000), the value a victim holds within society may “affect the level of blame attributed to the defendant,” (pg. 282). Hence, should the defendant commit homicide against a citizen that holds considerable worth to society, he may face a stricter sentence. Offenders in our sample were shown to face a lower likelihood of receiving a sentence above the legal minimum should the victim have no education, which supports Baumer et. al (2000) previously stated argument. According to the principle of equality in the eyes of the law, sentences should not respond to characteristics of the victim such as education or employment.

Of the variables that are related to defendant characteristics and the act of the homicide, the aggravating and mitigating circumstances of the case seem to determine the greatest variability in sentence lengths.

Studies also suggest that forensic tests also determine the sentence the offender receives. Moreover, we find that judges evaluate forensic evidence differently according to the agency that carried out the tests. Unlike jurors, judges are legally obligated to make the decision based on the validity of evidence presented in the court, (Waye, 2003). Consequently, judges generally have had the ability to refuse to admit forensic evidence that they deem lacks credibility in the U.S. court system, (Lillquist, 2003). As Solomon and Hackett (1996) suggest, judges and forensic scientists should work collaboratively so that those who weigh the legitimacy of forensic evidence are equipped to do so. Moreover, it is also important that that scientists and individuals or agencies that conduct forensic tests maintain a level of impartiality and standard when submitting evidence.

9. LIMITATIONS TO THE STUDY

Unfortunately, some files lacked information pertinent to the variables under examination. Had we had a more complete data set, we may have seen more variables of statistical significance. However, it is important to note that variables that had considerably fewer observations still showed statistically significant results.

We have also seen that more studies show that variables found at different levels influence sentence outcomes. This study has chosen to use simple OLS multivariate analysis as an important first step to unearth the extra-legal characteristics that explain sentence disparity. A vital next step would be to examine variables found at the city, court, and individual levels to see what impact they have on sentence outcomes.

10. POLICY IMPLICATIONS

Based on our findings, a fundamental question is raised: To what degree does judicial discretion endanger the defendant’s right of equality before the law? Can judges use substantive rationality when making their decisions?

Differences in sentence disparities have provoked policy makers and government officials to seek mechanisms that limit judges from using information extraneous to the legal dimensions of the case when deciding if and how long offenders should spend in prison. By limiting judges from using substantive rationality in their decision making, defendants are in theory viewed as equals before the law, despite differences in their sex, race, age etc. and any other extra-legal dimensions that may differ from case to case. Thus, disparities found in sentences

issued from crimes of equal severity can be attributed to legal characteristics of the case or the defendant, such as his previous criminal record.

This study suggests that, in Colombia, differences between sentences can be in some part attributed to extra-legal characteristics of the case. In a country that is characterized by crime and moreover, its high homicide rate, measures should be taken to ensure that those who commit one of the most egregious crimes are served justice not only to protect the safety of Colombians but also impart a message that all of those who commit homicide will be sternly punished. It is with this message that others will be deterred from committing homicide in the future. To this date, Colombia has no sentence guidelines.

However paramount it may seem to design sentencing guidelines to reduce judicial discretion in sentence making and guarantee that offenders receive a sentence that does not fall below the legal minimum, it is tantamount that policy makers understand cultural, social, organizational norms and constraints that may cause sentence guidelines to fail.

Various states, like Pennsylvania, Minnesota, and Washington State, have implemented guideline schemes with mixed results. In a comparative study, Kramer, Lubitz, and Kempinen (1989), analyze how these three states designed their sentence guidelines. Although the main aim of all three sentencing reforms was to reduce gratuitous disparities in sentence outcomes, each state limited judicial discretion to varying degrees. For example, whereas Minnesota and Washington State decided to substitute indeterminate schemes with a strict determinate scheme, Pennsylvania opted for a sentencing scheme that allowed judges to bear in mind the offender's background and whether the offender was capable of being rehabilitated. As expected, it was found that there was greater sentence disparity in Pennsylvania compared with both Minnesota and Washington State after all three states implemented sentencing reforms. Their analysis is limited because as Koons and Witts (2002) suggest, disparities may disappear immediately following the implementation of sentencing guidelines, but may return in subsequent years. Given that the three states implemented their sentencing reforms at different times, it may be erroneous to conclude that one state demonstrated greater sentence disparity than the other.

Other factors may also drive judges to deviate from following sentencing guidelines. The "modified just deserts", model adopted by many U.S. states, keeps judicial discretion at bay yet undoubtedly ignores community values, snubs the ability of the defendant to be rehabilitated, and disregards the psychological and economic costs that the defendant and his family may suffer should he be sent to prison, (Griffin & Wooldredge, 2006). Likewise, sentence guidelines may clash with cultural norms that have been long ingrained in the individual psyche. Should the Colombian justice system should decide to formulate sentencing guidelines, it would of utmost importance to deliberate how social beliefs, such as those about gender, may defy their success.

It may also be argued that sentencing reform may also strain the prison system. Judges under guidelines may be compelled to send offenders for longer periods of time of incarceration, which may result in a prison system that may be too bankrupt to handle such a strain, (Kramer, et al, 1989). Additional policy must be jointly implemented to tackle the negative outcomes associated with a strategy aimed at reducing sentence disparities.

Although this study makes a significant contribution to current literature, not only because it transcends geographical borders, but also because it shows that other factors, apart from those linked with the defendant, can influence: 1) the length of the sentence the offender receives, and 2) the probability that he will receive a sentence higher than the minimum. Further research should be conducted to understand what factors endanger every Colombian's right to have a fair trial.

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Annex 1 - History of Criminal Codes that Define Punishment of Homicide in Colombia between 1837 and 2000

A description of the main norms, definitions and sentences for simple and aggravated homicide (or assassination) in the Criminal Codes from 1837 to 2000 follow.

Norms	Definition and components	Sentence	Important comments
Criminal Code of 1837	<p>Simple: "Is homicide, death given by one man to another, without an order from a legitimate authority..."</p> <p>Aggravated or assassination: "Assassins are those who kill another, not only with premeditation, but also with the following aggravating circumstances: brutality, toxic or poisonous substances, with explosions or fire, with the aim of committing another crime or that the homicide be discovered"</p>	<p>4 to 10 years of forced labor, assuming that the law does not impose another sentence</p> <p>The death penalty</p>	<p>For the first time, punishment for homicide is systematized.</p> <p>Homicide is presumed to have been committed voluntarily, unless the prisoner can prove otherwise.</p>
Criminal Code of 1873	<p>Simple: The same definition as that found in Criminal Code of 1837.</p> <p>Aggravated: "is that which is committed with premeditation and in cold blood". Motives that define aggravated homicide are similar to those of the Criminal Code of 1837.</p>	8 years of imprisonment.	Note that the sentence increases by 2 years when "there were two or more victims or if the circumstances of how the homicide was committed are very grave."
Criminal Code of 1890	<p>Simple: The same definition as that found in Criminal Code of 1837.</p> <p>Assassination: Premeditated homicide is defined as "assassination" when the severity of the aggravating circumstances of the homicide is equal to that of the Criminal Code of 1837.</p>	<p>6 to 12 years of imprisonment</p> <p>The death penalty</p>	<p>In contrast to the 1837 Code, some specific circumstances are established to determine whether the homicide was committed voluntarily.</p> <p>The redefinition of assassination makes it easier to convict more people. It regulates parricide and premeditated murder more extensively than the Criminal Code of 1837.</p>
Law 109 of 1922	<p>Simple: "he who, with the intention of killing, causes the death of another..."</p> <p>Aggravated: If it is committed against direct relatives or against civil servants</p> <p>Assassination: If it is committed against relatives, with premeditation, by atrocious means and others similar to those found in the Criminal Code of 1837.</p>	<p>6 to 16 years of imprisonment</p> <p>8 to 20 years of imprisonment</p> <p>Fixed sentence of 30 years of imprisonment</p>	<p>This Criminal Code made the sentence for simple homicide more specific by qualifying the murder victim to that of: civil servant, spouse, and direct relative.</p> <p>The distinction between the definition of aggravated homicide and assassination is not clear, though the Law makes this distinction.</p>
Criminal Code of 1936	<p>Simple: The same definition as that found in the Law 109 of 1922.</p> <p>Aggravated: The same definition as that found in Criminal Code of 1922.</p> <p>Assassination: If it is committed against relatives, without motive or with a heinous motive, in premeditation of committing another crime, to cover up another crime, to take advantage of minors, or for money.</p>	<p>Fixed sentence of 16 years of imprisonment</p> <p>16 to 30 years of imprisonment</p>	<p>Other motives were added to the definition of "assassination": 1) premeditation, and 2) motive must be considered ignoble. It is interesting to note that premeditation alone is not sufficient to define "assassination".</p>
Criminal Code of 1980	<p>Simple: "He who kills another..."</p> <p>Aggravated: He who kills:</p>	10 to 15 years of imprisonment	Sentences increase by a fifth of the

	<ul style="list-style-type: none"> -Direct relatives, adopted or adopting relatives, spouse or fourth degree blood relative -To prepare, facilitate or carry out another crime -To cover up or ensure impunity for themselves or their accomplices <p>Aggravated homicides are also classified as:</p> <ul style="list-style-type: none"> - Crimes presenting a common danger to the community - Crimes that are motivated by a promise, profit or considered ignoble - With brutality - Making the victim defenseless 	16 to 30 years of imprisonment	original sentence length when the homicide is committed: 1) against relatives of the President of the Republic, 2) to cover up or facilitate another crime, 3) to take advantage of an innocent person, 4) with cruelty, or 5) to take advantage of a person of inferior status
Law 40 of 1993 (modified some components of the Criminal Code of 1980)	<p>Simple: The same definition as that found in the Criminal Code of 1980</p> <p>Aggravated: ..when the homicide is committed with terrorist aims, to develop terrorist activities or against a person who is or would be a civil servant, journalist, candidate in popular elections, community leader, union leader, politician, religious leader, member of the public forces, university professor, diplomat or consular agent in the Nation's service because of his/her responsibilities or against any inhabitant because of their beliefs or political opinions</p>	<p>25 to 40 years of imprisonment</p> <p>40 to 60 years of imprisonment</p>	<p>This law adopts the national statute against kidnapping and other specifications, among them a considerable increase in the minimum and maximum sentences for homicide.</p> <p>In addition to the motives characterized as those pertaining to aggravated homicide found in the Criminal Code of 1980, the term "terrorism" is included as one in the Criminal Code of 1993. This criminal code also modified the minimum and maximum sentence lengths, establishing the lengthiest punishment in the period studied. Homicide committed against public servants, journalists, candidates in popular elections, union leaders, religious leaders, members of the public forces, university professors, were also included among other aggravating circumstances.</p>
Law 599 of 2000	<p>Simple: The same definition as that found in the Criminal Code of 1980</p> <p>Aggravated: The motives pertinent to aggravated homicide remained the same as those found in the Criminal Code of 1980 and in Law 40 of 1993. Two more motives for aggravated homicide were added: 1) if the homicide is committed against an individual who is protected by international law (individuals who do not participate in armed conflict), and 2) if the homicide is committed against judges who preside over the peace process or peace commissions and political leaders.</p>	<p>13 to 25 years of imprisonment</p> <p>25 to 40 years of imprisonment</p>	Both the minimum and maximum sentences were reduced with the issuing of this new code.

Source: Table drawn up by Elvira Maria Restrepo