

Criminal Justice Data Analysis

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- Major public-use criminal justice data bases in the United States
- How these data are collected
- Common uses (innovative and not-so-innovative)
- Administrative criminal justice data
 - Gaining access
 - Linking issues

Some key distinctions important to criminal justice data

- Qualitative nature of data
 - Crime/arrest
 - Criminal procedure
 - Corrections
- Samples vs. universe
- Microdata vs. summary level information
- Public use vs. administrative

FBI's Uniform Crime Reporting Program

- Began in 1929 under an initiative spearheaded by the International Association of Chiefs of Police (IACP)
- As of 2012, data reported into the program by 17,207 active law enforcement agencies (LEA).
- In 46 states, agencies report data to state UCR program usually housed within state Criminal Justice Information Service CJIS divisions. In four states, agencies report data directly to the FBI.
- In half of states, LEAs are required to report into the UCR system.

Agency-Level Data products produced by the UCR

- Offenses known and cleared by arrest (Part I offenses)
- Arrest by age, sex, and race (monthly and annual summaries) for Part II offenses
- Property stolen and recovered
- Arson incidents and clearance
- Police Employee (LEOKA) data

Micro/incident level data produced by the UCR

- Hate Crime Data (since 1990)
- Supplemental Homicide Reports (SHR)

Part I Offenses

- **Murder and non-negligent manslaughter:** defined as the willful killing of one human being by another.
- **Rape/Sexual Assault:** rape refers to forced sexual intercourse, inclusive of psychological coercion and physical force. Sexual assault is distinct from rape and includes any unwanted sexual contact between victim and offender.
- **Robbery:** a completed or attempted theft directly from a person by force of threat with or without a weapon and with or without an injury.
- **Assault:** an attack with or without a weapon and with or without an injury. Attack with a weapon or an attack without a weapon resulting in a serious injury is referred to as **aggravated assault**. An attack without a weapon with no or minor injuries to the victim is referred to as **simple assault**.
- **Burglary:** the unlawful or attempted or forcible entry of a residence, often but not necessarily involving theft.
- **Larceny/theft:** the taking of property without personal contact.
- **Motor vehicle theft:** the stealing or unauthorized taking of a motor vehicle, including attempted theft.

Classifying and Scoring Part I Offenses

- Offense Classification: determining the proper crime category for reporting offenses to UCR.
- Scoring: Counting offenses and clearances.

Hierarchy Rule

There is a significance to the order in which the Part I offenses are presented, with criminal homicide being the highest in the hierarchy and arson being the lowest. The Part I offenses are as follows:

1. Criminal Homicide
 - a. Murder and Nonnegligent Manslaughter
 - b. Manslaughter by Negligence
2. Forcible Rape
 - a. Rape by Force
 - b. Attempts to Commit Forcible Rape
3. Robbery
 - a. Firearm
 - b. Knife or Cutting Instrument
 - c. Other Dangerous Weapon
 - d. Strong-arm—Hands, Fists, Feet, etc.
4. Aggravated Assault
 - a. Firearm
 - b. Knife or Cutting Instrument
 - c. Other Dangerous Weapon
 - d. Hands, Fists, Feet, etc.—Aggravated Injury
5. Burglary
 - a. Forcible Entry
 - b. Unlawful Entry—No Force
 - c. Attempted Forcible Entry
6. Larceny-theft (except motor vehicle theft)
7. Motor Vehicle Theft
 - a. Autos
 - b. Trucks and Buses
 - c. Other Vehicles
8. Arson
 - a.–g. Structural
 - h.–i. Mobile
 - j. Other

Exception to the Hierarchy Rule

- Justifiable homicide
- Motor vehicle theft (come before larceny theft)
- Arson –reported regardless. Additional offenses committed alongside the arson are then subject to the hierarchy rule for separate reporting.

Other rules impacting classification and scoring

- Separation of time and place rule
- Hotel rule

RETURN A - MONTHLY RETURN OF OFFENSES KNOWN TO THE POLICE

This report is authorized by law Title 28, Section 534, U.S. Code. While you are not required to respond, your cooperation in forwarding this report by the seventh day after the close of the month to Uniform Crime Reports, Federal Bureau of Investigation, Clarksburg, WV, 26306, will assist in compiling comprehensive, accurate national crime figures on a timely basis.

1 CLASSIFICATIONS OF OFFENSES	Date Entry	2 Offenses reported or known to police (Include "unfounded" and attempts)	3 Unfounded, i.e. false or baseless complaints	4 Number of actual Offenses (column 2 minus Column 3) (Include attempts)	5 Total offenses cleared by arrest or exceptional means (Include column 6)	6 Number of clearances involving only persons under 18 years of age
1. CRIMINAL HOMICIDE						
a. Murder / Nonnegligent Homicide	11					
b. Manslaughter by Negligence	12					
2. FORCIBLE RAPE TOTAL	20					
a. Rape by Force	21					
b. Attempts to commit Forcible Rape	22					
3. ROBBERY TOTAL	30					
a. Firearm	31					
b. Knife or Cutting Instrument	32					
c. Other Dangerous Weapon	33					
d. Strong-arm (Hands, Fists, Feet, etc.)	34					
4. ASSAULT TOTAL	40					
a. Firearm	41					
b. Knife or Cutting Instrument	42					
c. Other Dangerous Weapon	43					
d. Hands, Fists, Feet, etc. - Aggravated Injury	44					
e. Other Assaults - Simple, Not Aggravated	45					
5. BURGLARY TOTAL	50					
a. Forcible Entry	51					
b. Unlawful Entry - No Force	52					
c. Attempted Forcible Entry	53					
6. LARCENY - THEFT TOTAL (Except Motor Vehicle Theft)	60					
7. MOTOR VEHICLE THEFT TOTAL	70					
a. Autos	71					
b. Trucks and Buses	72					
c. Other Vehicles	73					
GRAND TOTAL	77					

CHECKING ANY OF THE APPROPRIATE BLOCKS BELOW WILL ELIMINATE YOUR NEED TO SUBMIT REPORTS WHEN THE VALUES ARE ZERO. THIS WILL ALSO AID THE NATIONAL PROGRAM IN ITS QUALITY CONTROL EFFORTS.

NO SUPPLEMENTARY HOMICIDE REPORT SUBMITTED SINCE NO MURDERS, JUSTIFIABLE HOMICIDES, OR MANSLAUGHTERS BY NEGLIGENCE OCCURRED IN THIS JURISDICTION DURING THE MONTH.

NO SUPPLEMENT TO RETURN A REPORT SINCE NO CRIME OFFENSES OR RECOVERY OF PROPERTY REPORTED DURING THE MONTH.

NO LAW ENFORCEMENT OFFICERS KILLED OR ASSAULTED REPORT SINCE NONE OF THE OFFICERS WERE ASSAULTED OR KILLED DURING THE MONTH.

NO AGE, SEX, AND RACE OF PERSONS ARRESTED UNDER 18 YEARS OF AGE REPORT SINCE NO ARRESTS OF PERSONS WITHIN THIS AGE GROUP.

NO AGE, SEX, AND RACE OF PERSONS ARRESTED 18 YEARS OF AGE AND OVER REPORT SINCE NO ARRESTS OF PERSONS WITHIN THIS AGE GROUP.

NO MONTHLY RETURN OF ARSON OFFENSES KNOWN TO LAW ENFORCEMENT REPORT SINCE NO ARSONS OCCURRED.

DO NOT USE THIS SPACE

	INITIALS
RECORDED	
EDITED	
ENTERED	
ADJUSTED	
CORRES	

How crime and clearances are recorded

8. A teller chased a robber from a bank. The robber fired at him. His shot missed the teller but killed a woman walking on the street. The police did not locate the robber. (One offense, one offense not cleared.)

1 CLASSIFICATION OF OFFENSES	Data Entry	2 <u>Offenses</u> reported or known to police (Include "unfounded" and attempts)	3 Unfounded, I.e. false or baseless complaints	4 Number of actual <u>Offenses</u> (column 2 minus Column 3) (Include attempts)	5 Total offenses cleared by arrest or exceptional means (Include column 6)	6 Number of clearances involving only persons under 18 years of age
1. <u>CRIMINAL HOMICIDE</u>						
a. Murder/Nonnegligent Homicide	11	1		1		
b. Manslaughter by Negligence	12					

9. While playing cards, two men got into an argument. The first man attacked the second with a broken bottle. The second man pulled a gun and killed the first. The police arrested the shooter; he claimed self-defense. The police found no other witnesses. (One offense, one offense cleared by arrest.)

1 CLASSIFICATION OF OFFENSES	Data Entry	2 Offenses reported or known to police (Include "unfounded" and attempts)	3 Unfounded, i.e. false or baseless complaints	4 Number of actual Offenses (column 2 minus Column 3) (Include attempts)	5 Total offenses cleared by arrest or exceptional means (Include column 6)	6 Number of clearances involving only persons under 18 years of age
1. <u>CRIMINAL HOMICIDE</u>						
a. Murder/Nonnegligent Homicide	11	1		1	1	
b. Manslaughter by Negligence	12					

11. A police officer answered a bank alarm and surprised the robber coming out of the bank. The robber saw the responding officer and fired at him. The officer returned fire, killing the robber. The officer was charged in a court of record as a matter of routine in such cases. (One offense of criminal homicide, unfounded, and one offense of robbery, cleared by exceptional means.)

1 CLASSIFICATION OF OFFENSES	Data Entry	2 Offenses reported or known to police (Include "unfounded" and attempts)	3 Unfounded, i.e. false or baseless complaints	4 Number of actual Offenses (column 2 minus Column 3) (Include attempts)	5 Total offenses cleared by arrest or exceptional means (Include column 6)	6 Number of clearances involving only persons under 18 years of age
1. CRIMINAL HOMICIDE						
a. Murder/Nonnegligent Homicide	11	1	1			
b. Manslaughter by Negligence	12					

3. ROBBERY TOTAL	30	1		1	1	
a. Firearm	31	1		1	1	
b. Knife or Cutting Instrument	32					
c. Other Dangerous Weapon	33					
d. Strong-arm (Hands, Fists, Feet, etc.)	34					

Format of public use data in Crime in “Offenses Known and Cleared by Arrest”

- Data available since the 1960s at the National Archive of Criminal Justice Data webpage
<https://www.icpsr.umich.edu/icpsrweb/content/NACJD/guides/ucr.html>
- Data in flat file: one record per agency with reported crimes totals, unfounded crime totals, actual crime totals, total clearances, and total clearances involving offenders under 18 by offense categories and month
 - Basically, public use data includes all of the information on monthly return Form A.
- Data contain flags for number of months with reported data. Less of an issue in recent years, but a big issue in earlier years.

A side note on agency identifiers (Originating Agency Identifiers)

- Issued by the National Crime Information Center (division of FBI) to Law Enforcement Agencies, Criminal Justice Agencies, non-criminal justice agencies with authority to submit fingerprints and query criminal history records.
- 9-digit identifier: Last two digits 00 in federal data sets for LEAs. May take non-zero integer values to distinguish different divisions within law enforcement agencies with authority to arrest, report arrests and crimes etc.

LEA example

Oakland PD

CA0010900

- First two digits (positions 1-2): Two letter state abbreviations
- Next three digits (positions 3-5): NCIC county codes that do not match FIPS codes
- Next two digits (position 6-7): distinct LEA's within county. 00's for sheriff, numeric values for independent city and special district police departments.
- Last two digits (position 8-9): set to zero in federal data. May be non-zero but numeric (for sub=-division within a given LEA) in state reporting systems.
- UCR data sets use the first seven digits only.

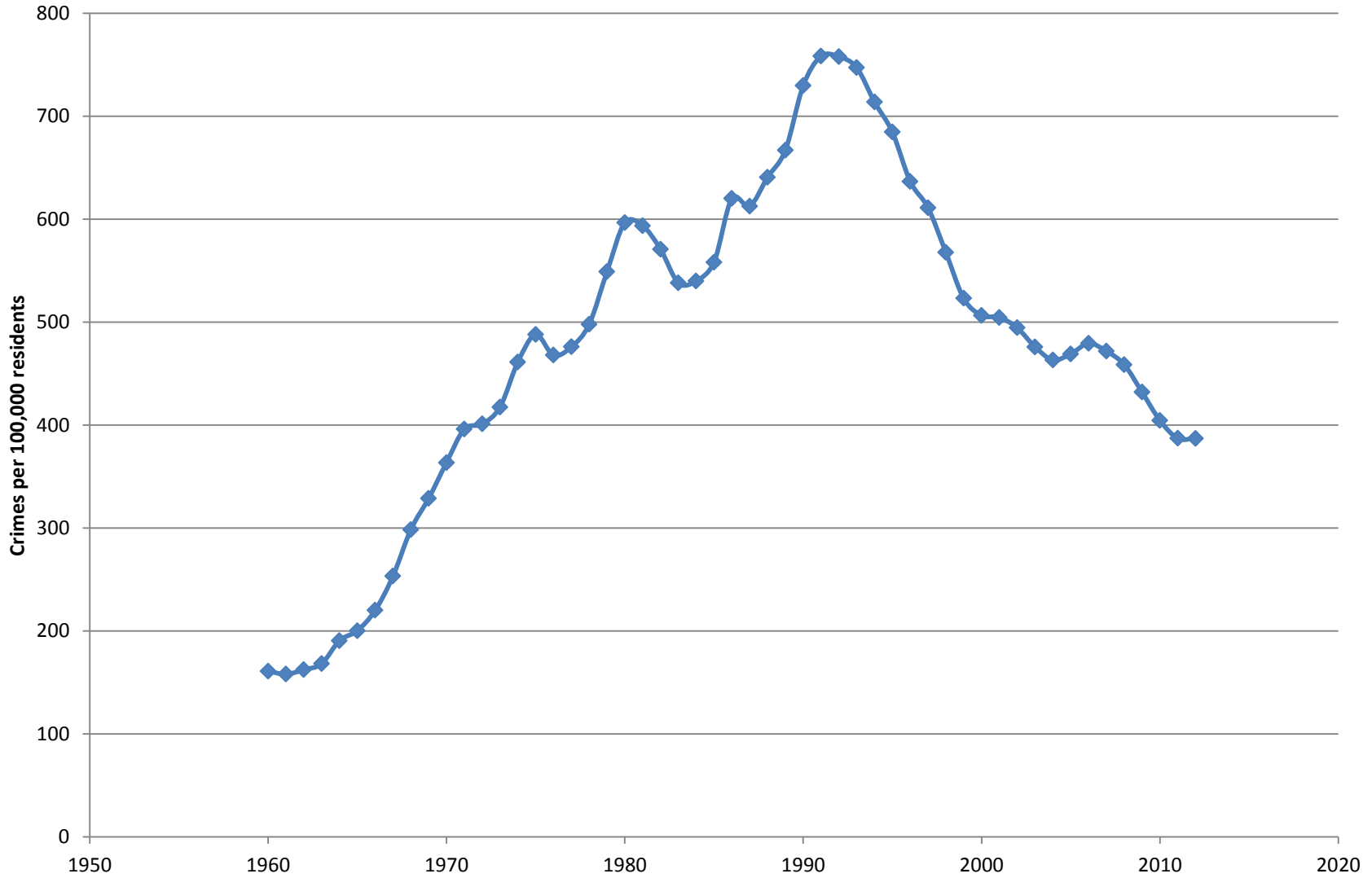
Non-LEA example
San Quentin State Prison
CA021015C

- First two digits (positions 1-2): Two letter state abbreviations
- Next three digits (positions 3-5): NCIC county codes that do not match FIPS codes
- Next two digits (position 6-7): distinct LEA's within county. May take numeric value that matches that for city police department. Does not indicate city.
- Last two digits (position 8-9): numeric value for seventh digit, alpha value for 9th. "C" for correctional facility. "Z" non criminal justice data agency.
 - See NCIC 2000 Operating Manual ORIGINATING AGENCY IDENTIFIER (ORI) FILE, Posted at <http://www.rowancountync.gov/Portals/0/Government/Departments/Telecommunications/intranet/ncic/ORI.htm#1.2%20NCIC%202000%20ORI%20REQUEST%20AND%20ASSIGNMENT%20POLICY>

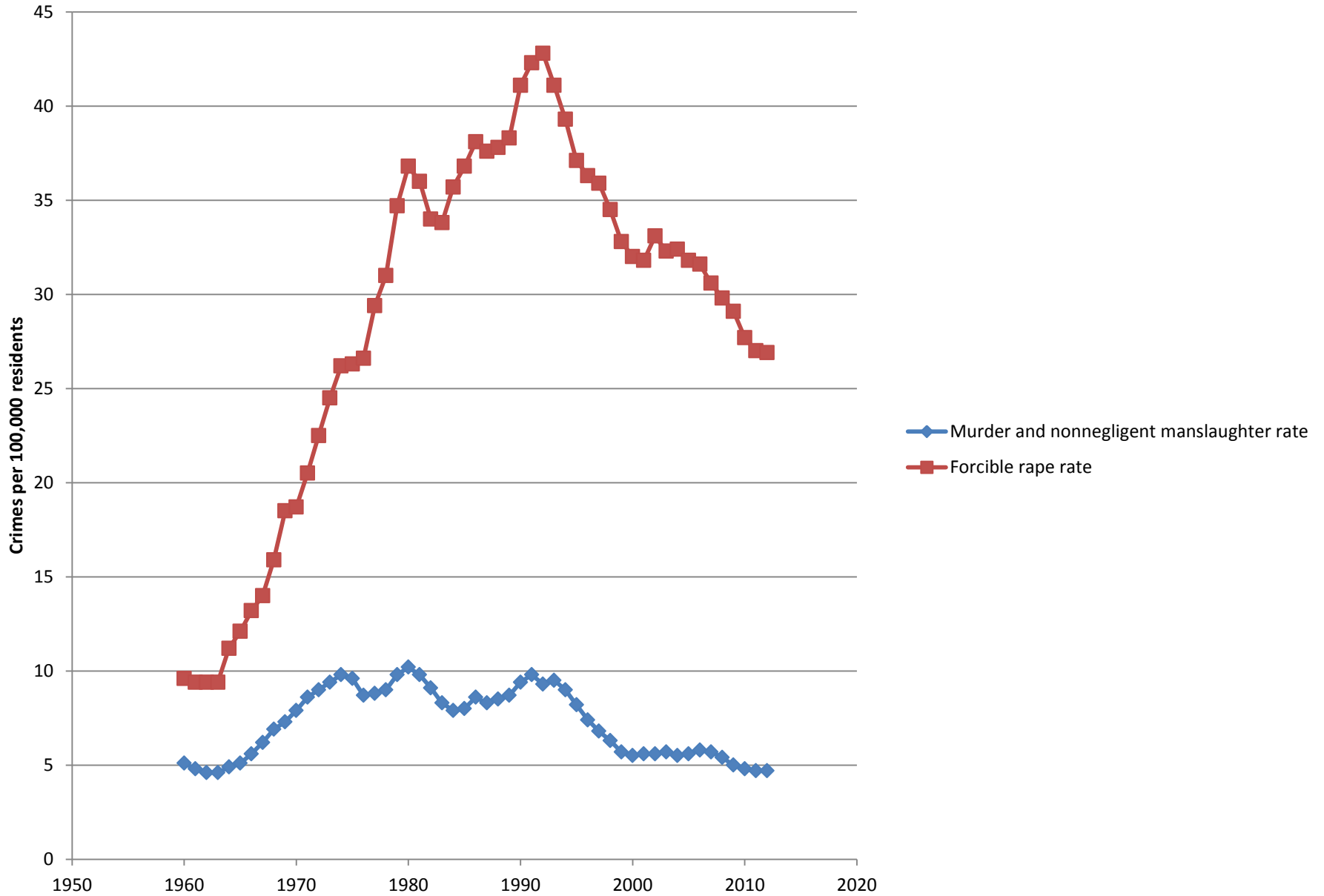
Aggregating from agency to county, state, nation

- Imputation for agencies with incomplete reporting
 - For those reporting $3 < N < 12$ months, annual crime total imputed as the average for reported months multiplied by 12.
 - For those reporting $N < 3$ months, crime rate imputed by applying the average crime rate for cities of similar size within the city's geographic stratum.

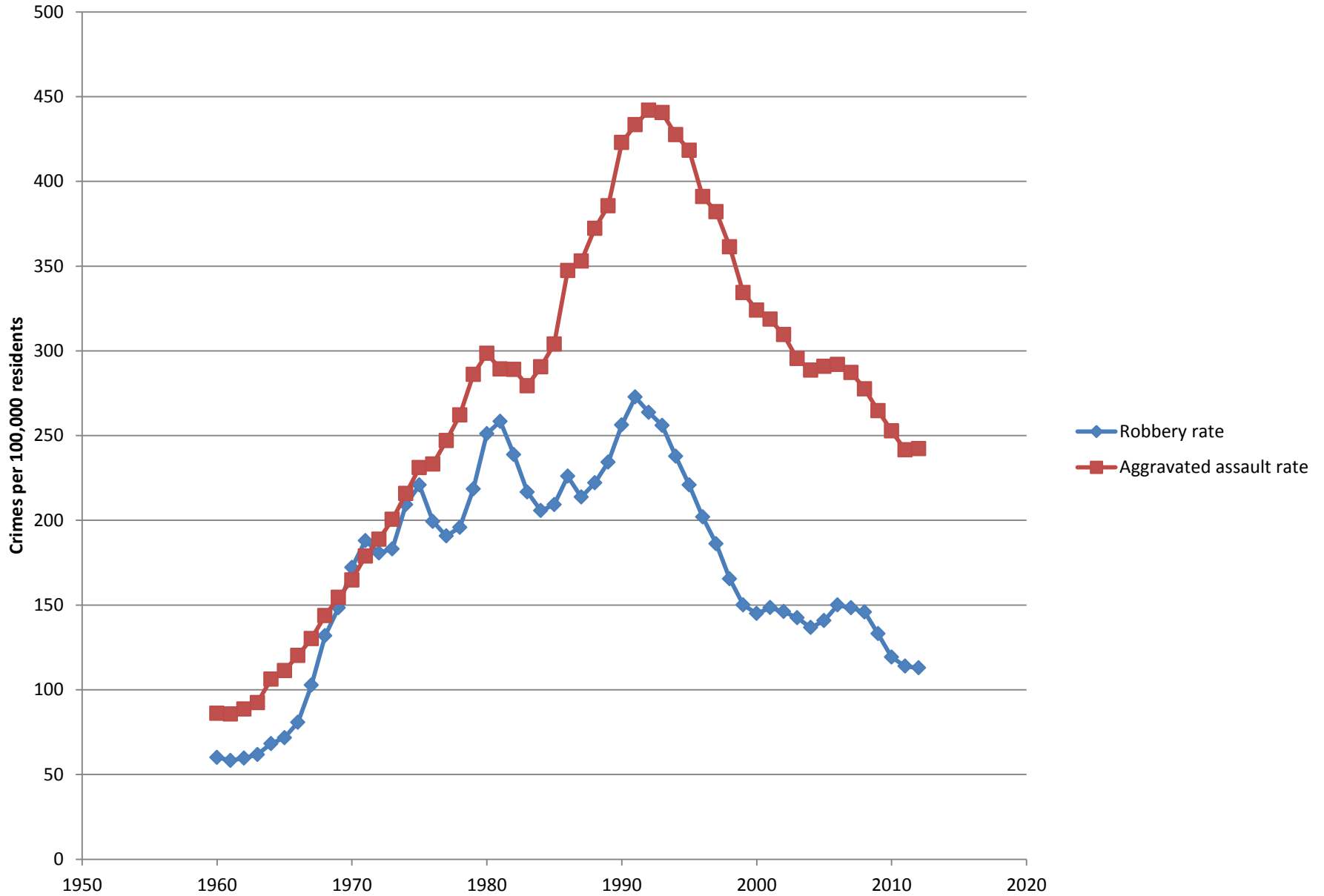
Violent Crime rate



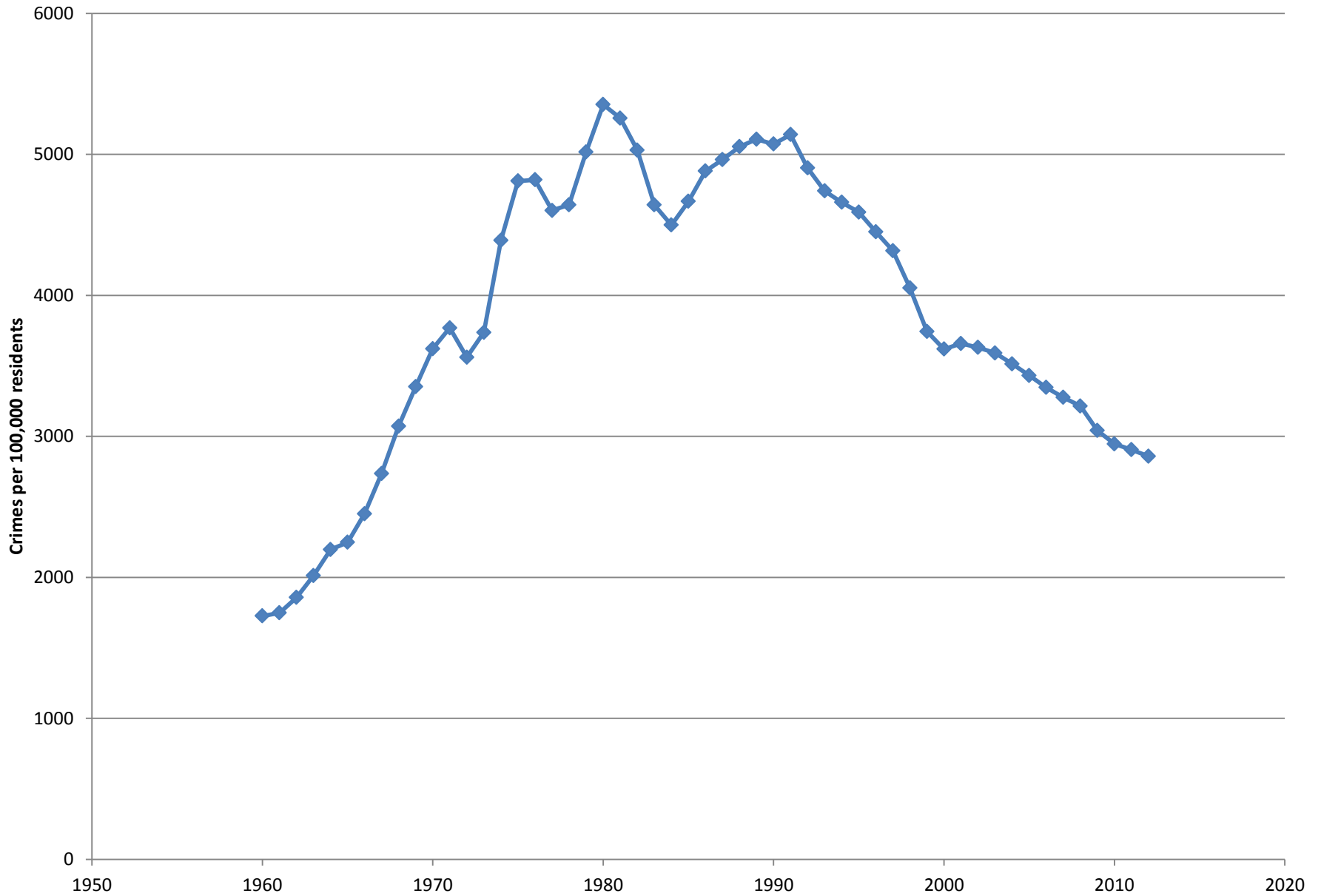
Rates of Murder and Forcible Rape



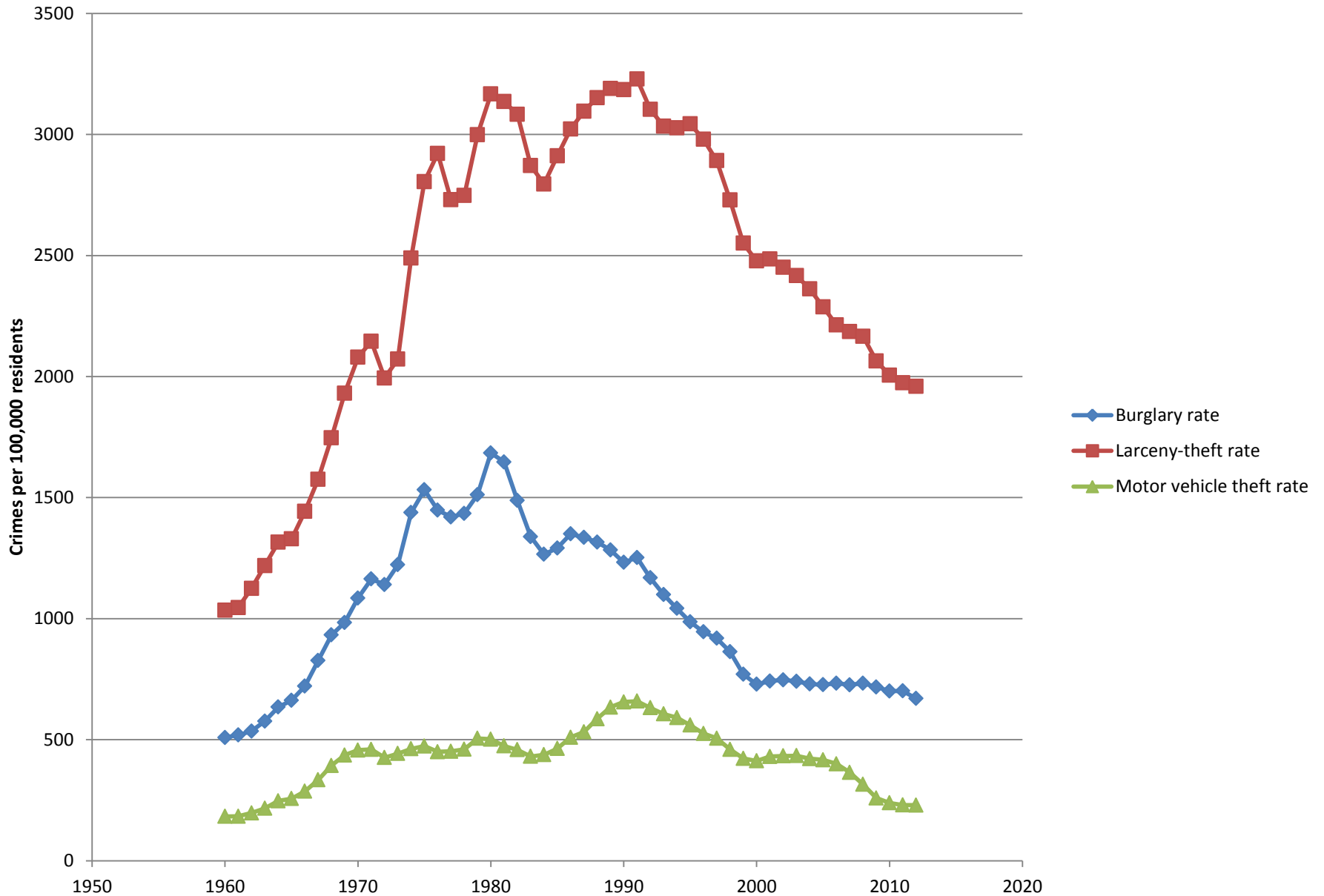
Rates of Robbery and Aggravated Assault



Property crime rate



Rates of Burglary, Larceny Theft, and Auto Theft



Benchmarking the UCR against the National Crime Victimization Survey

- Begun in the 1970s and carried out by the Census Bureau
- Interview with all members 12. In 2014 over 90,000 households (roughly 163,000 people). Sample size half that in previous years.
- Includes all crimes reported and not-reported to police
- Property crimes tabulated per 1,000 households while violent crime tabulated per 1,000 residents 12 and over.

TABLE 4**Percent of victimization reported to police, by type of crime, 2003, 2011, and 2012**

Type of crime	2003	2011	2012
Violent crime^a	48%	49%	44%
Rape/sexual assault	56	27	28
Robbery	64	66	56
Assault	45	48	44
Aggravated assault	56	67	62
Simple assault	43	43	40
Domestic violence ^b	57	59	55
Intimate partner violence ^c	60	60	53
Violent crime involving injury	56	61	59
Serious violent crime^d	58%	61%	54%
Serious domestic violence ^b	61	58	61
Serious intimate partner violence ^c	63	59	55
Serious violent crime involving weapons	59	67	56†
Serious violent crime involving injury	64	66	56
Property crime^a	38%	37%	34%†
Burglary	54	52	55
Motor vehicle theft	77	83	79
Theft	31	30	26†

TABLE 7**Rate of violent victimization, by demographic characteristics of victims, 2003, 2011, and 2012**

Demographic characteristics of victims	Violent crime ^a			Serious violent crime ^b		
	2003	2011	2012	2003	2011	2012
Total	32.1	22.6	26.1	10.0	7.2	8.0
Sex						
Male	34.6	25.5	29.1	10.2	7.7	9.4
Female	29.7	19.8	23.3	9.9	6.7	6.6
Race/Hispanic origin						
White ^c	32.3	21.6	25.2	9.4	6.5	6.8
Black/African American ^c	35.9	26.4	34.2 ‡	12.8	10.8	11.3
Hispanic/Latino	26.6	23.9	24.5	9.7	7.2	9.3
American Indian/Alaska Native ^c	85.2	45.4	46.9	35.2	12.6 †	26.2 †
Asian/Native Hawaiian/other Pacific Islander ^c	9.9	11.2	16.4	5.1	2.5 †	9.1 †
Two or more races ^c	140.7	65.0	42.8	47.8	26.2	9.5 † ‡
Age						
12–17	78.3	37.7	48.4 ‡	22.7	8.8	9.9
18–24	63.8	49.1	41.0	23.7	16.3	14.7
25–34	39.0	26.5	34.2 ‡	11.9	9.6	10.9
35–49	23.1	21.9	29.1 †	7.1	7.0	9.5
50–64	16.3	13.1	15.0	4.2	4.3	4.6
65 or older	3.1	4.4	5.7	0.9	1.7	1.6
Marital status						
Never married	57.7	35.5	40.7	18.2	11.7	11.9
Married	14.2	11.0	13.5	3.2	3.7	3.9
Widowed	7.8	3.8	8.3 †	1.2	0.7 †	2.6 ‡
Divorced	44.6	37.8	37.0	17.0	9.2	10.9
Separated	100.9	73.0	83.1	47.8	26.4	39.5

Note: † Significant at the 10% level; ‡ Significant at the 5% level; † ‡ Significant at the 1% level. For more details, see table 11 for standard errors.

TABLE 8
Rate of violent and property victimization, by household location, 2003, 2011, and 2012

Household location	Violent crime ^a			Serious violent crime ^b			Property crime ^c		
	2003	2011	2012	2003	2011	2012	2003	2011	2012
Total	32.1	22.6	26.1 †	10.0	7.2	8.0	173.4	138.7	155.8 †
Region									
Northeast	28.8	20.3	24.7	7.4	6.4	4.6	132.3	98.1	116.9 †
Midwest	37.1	26.4	23.9	10.7	7.8	8.6	173.8	129.9	153.1 †
South	29.6	18.4	22.1	9.9	6.5	6.2	167.0	134.4	143.4 ‡
West	33.7	27.1	35.5 †	11.6	8.4	12.5 †	220.1	189.1	210.5 †
Location of residence									
Urban	39.4	27.4	32.4	14.8	9.8	11.4	224.7	166.0	187.0 †
Suburban	29.2	20.2	23.8	8.7	5.7	6.6	154.8	128.6	138.9 †
Rural	28.8	20.2	20.9	6.4	6.7	5.1	143.8	112.0	142.9 †

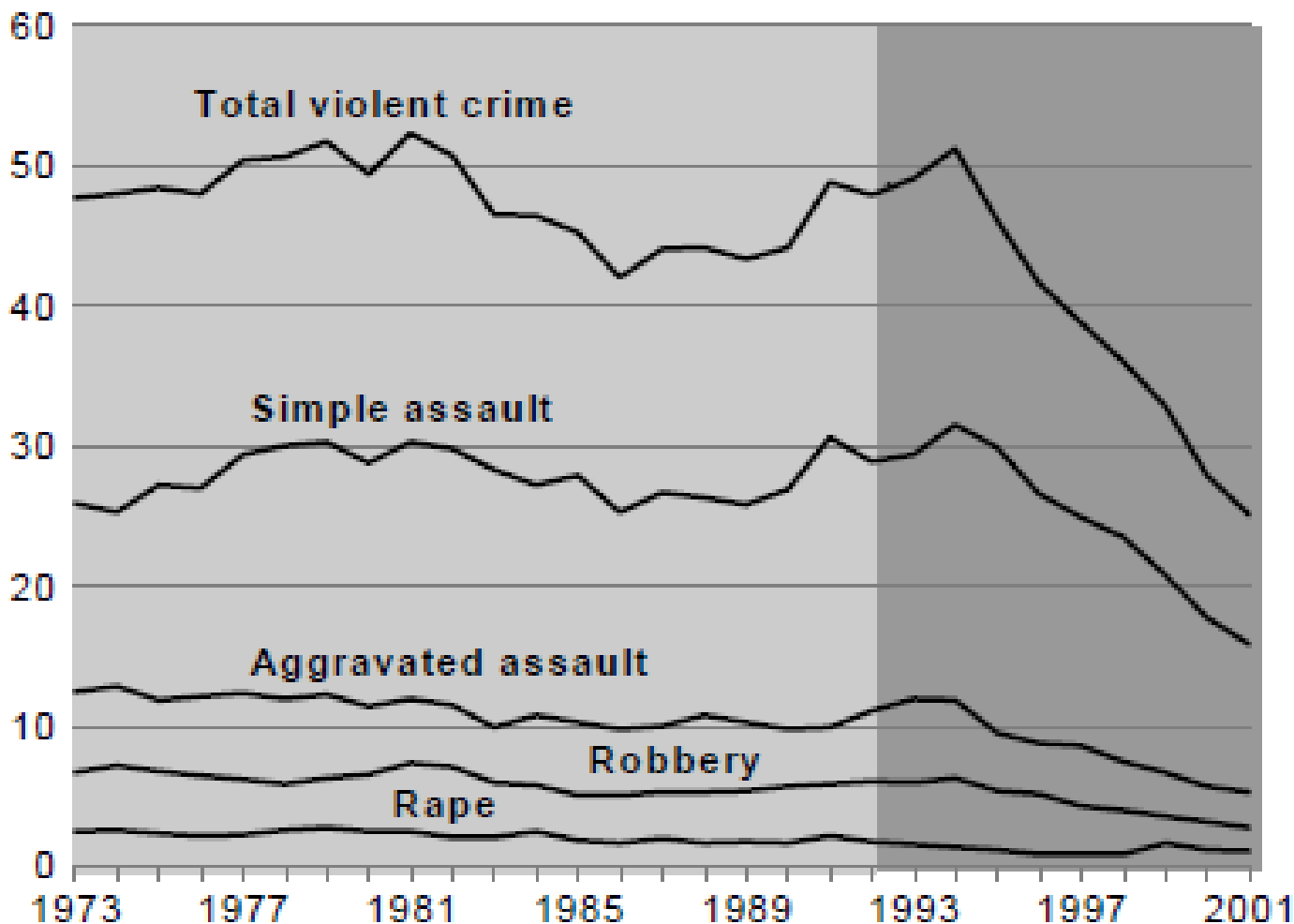
Do UCR and NCVS Crime Trends Agree?

- Since mid 1990s, yes
- Before mid 1990s, no
- Raises concerns about trends in participation and completeness of reports made to the UCR program

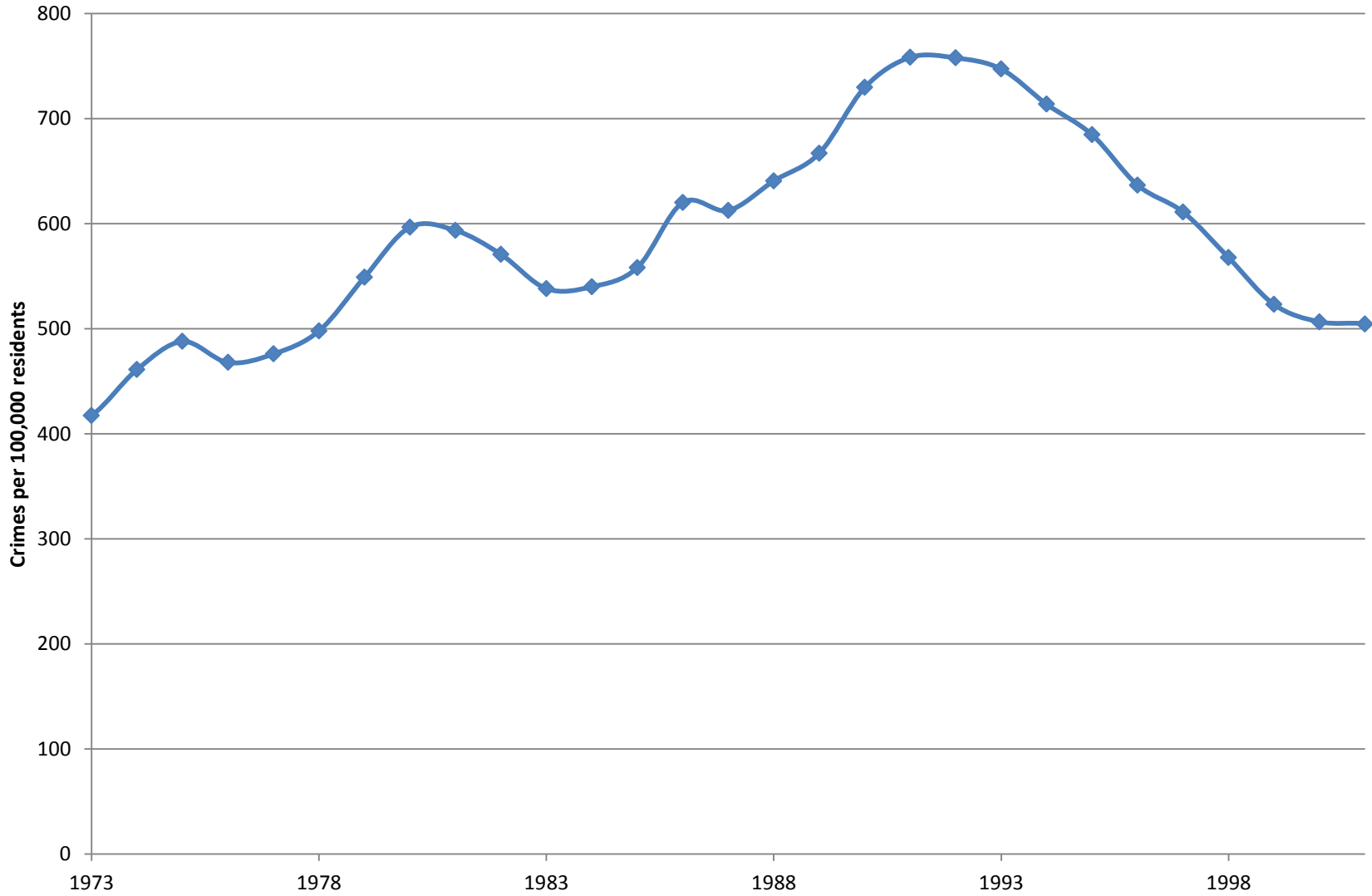
Some key differences between two surveys

- NCVS doesn't include murder
- NCVS doesn't include commercial burglary/robbery
- NCVS includes simple assault, UCR violent crime does not.
- UCR does not capture unreported crimes.
- Public use NCVS contains little info on geographic variation (South, West, Midwest, Northeast)

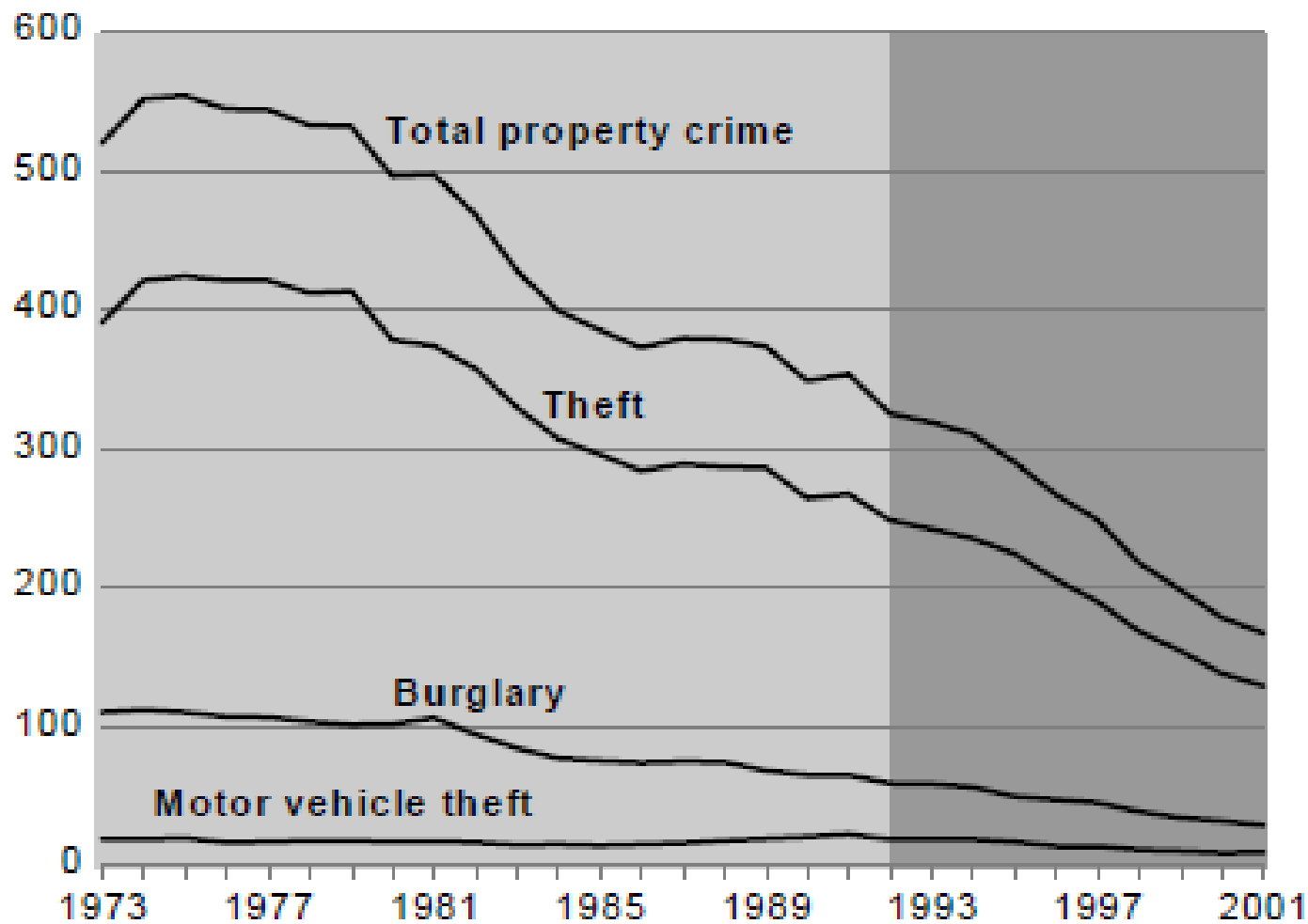
Violent crime victimization rate per 1,000 persons age 12 or older, 1973-2001



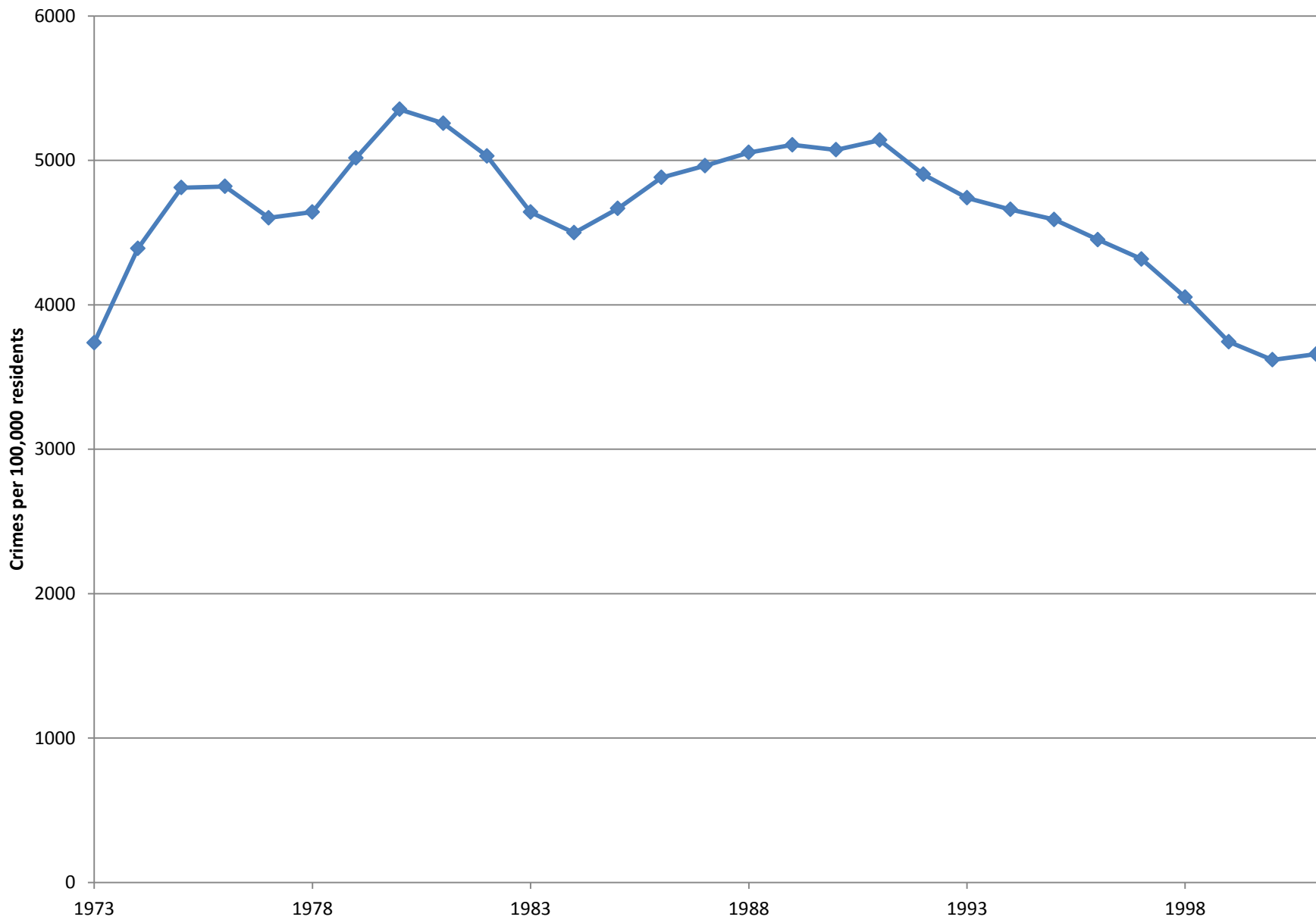
Violent Crime rate



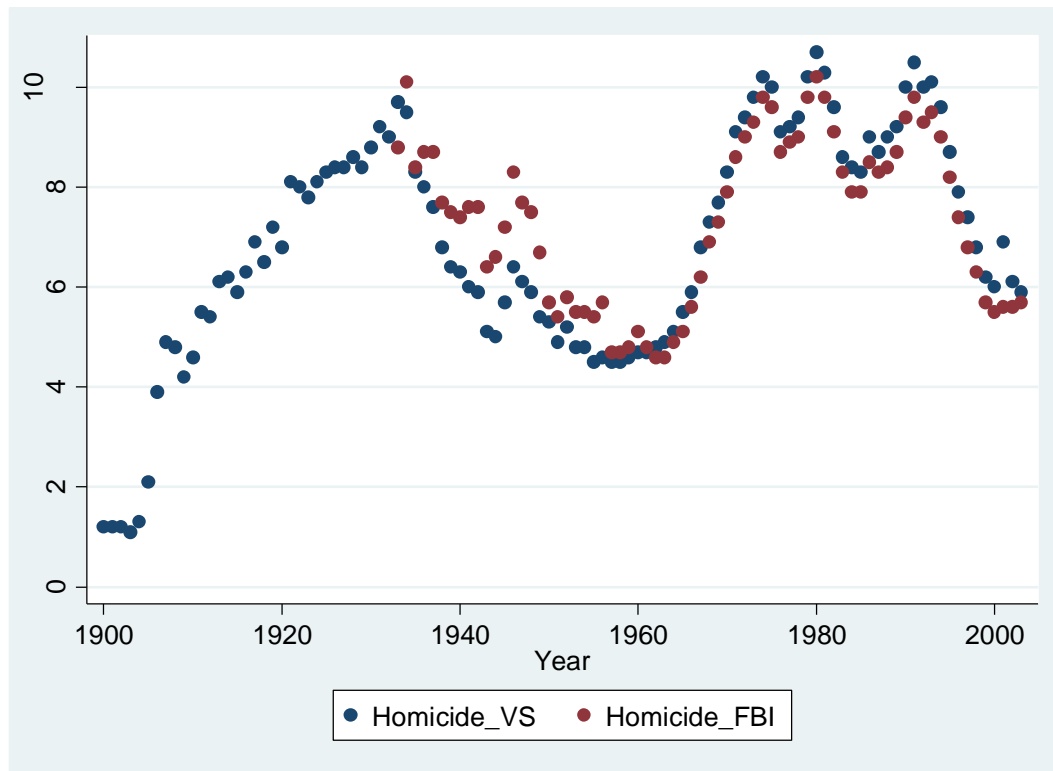
Property crime victimization rate per 1,000 households, 1973-2001



Property crime rate



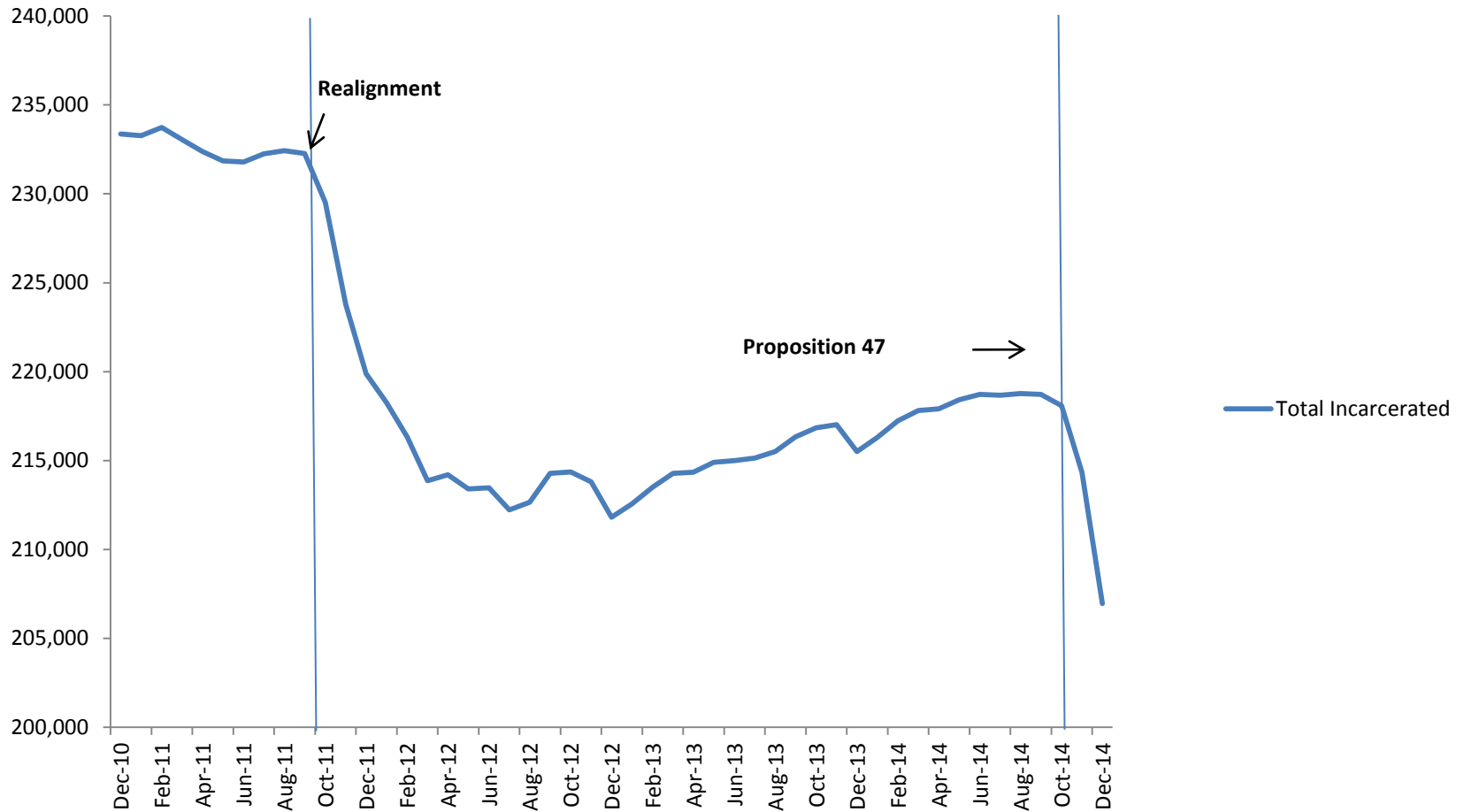
Comparisons of homicide rates using vital statistics (blue dots) and FBI supplemental homicide reports (red dots)



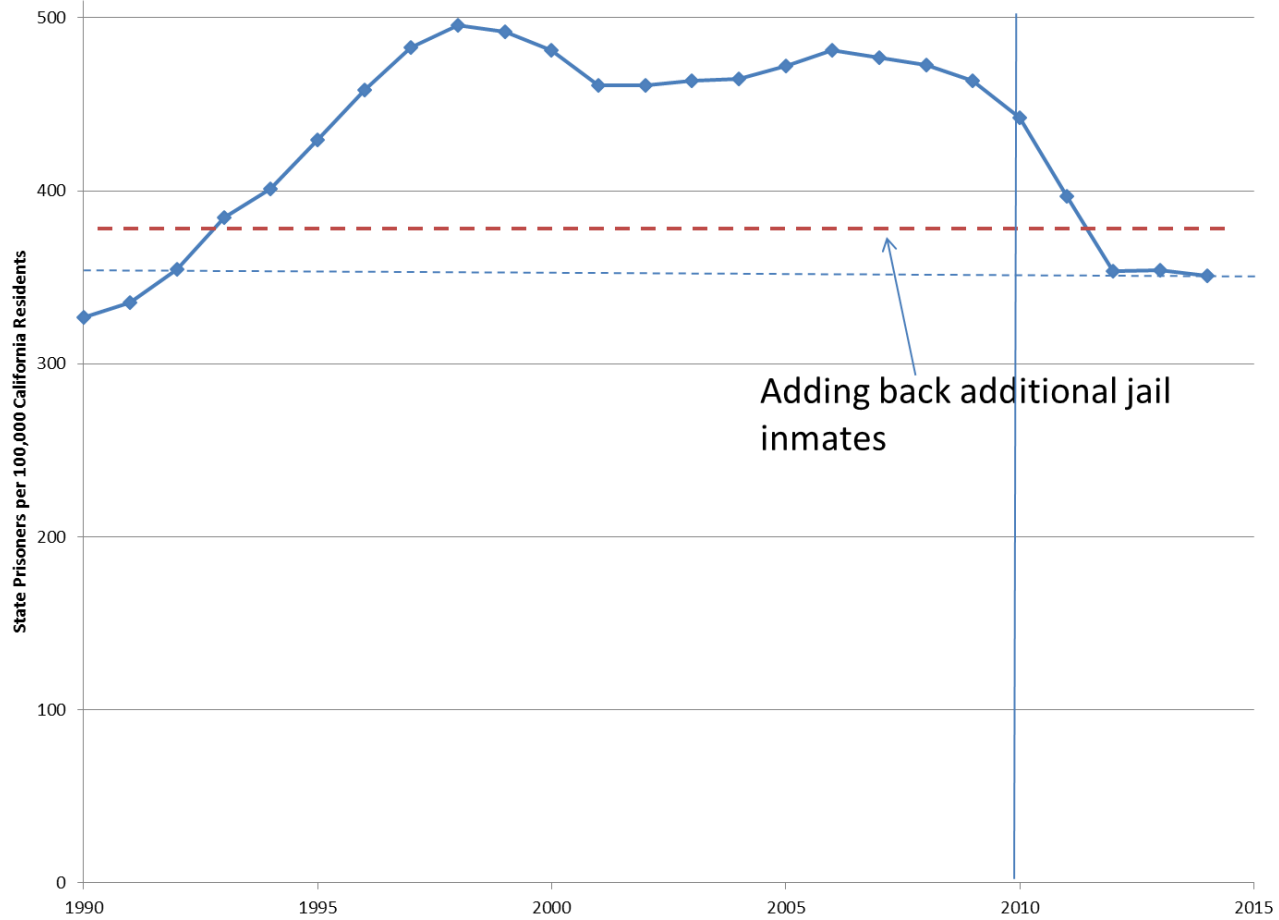
Research punch-line from these comparisons

- Inconsistency in trends suggest one should be careful with early years of UCR
 - E.g., include time fixed effects, state-specific time trends in panel data studies
 - Pay attention to the degree of imputation.

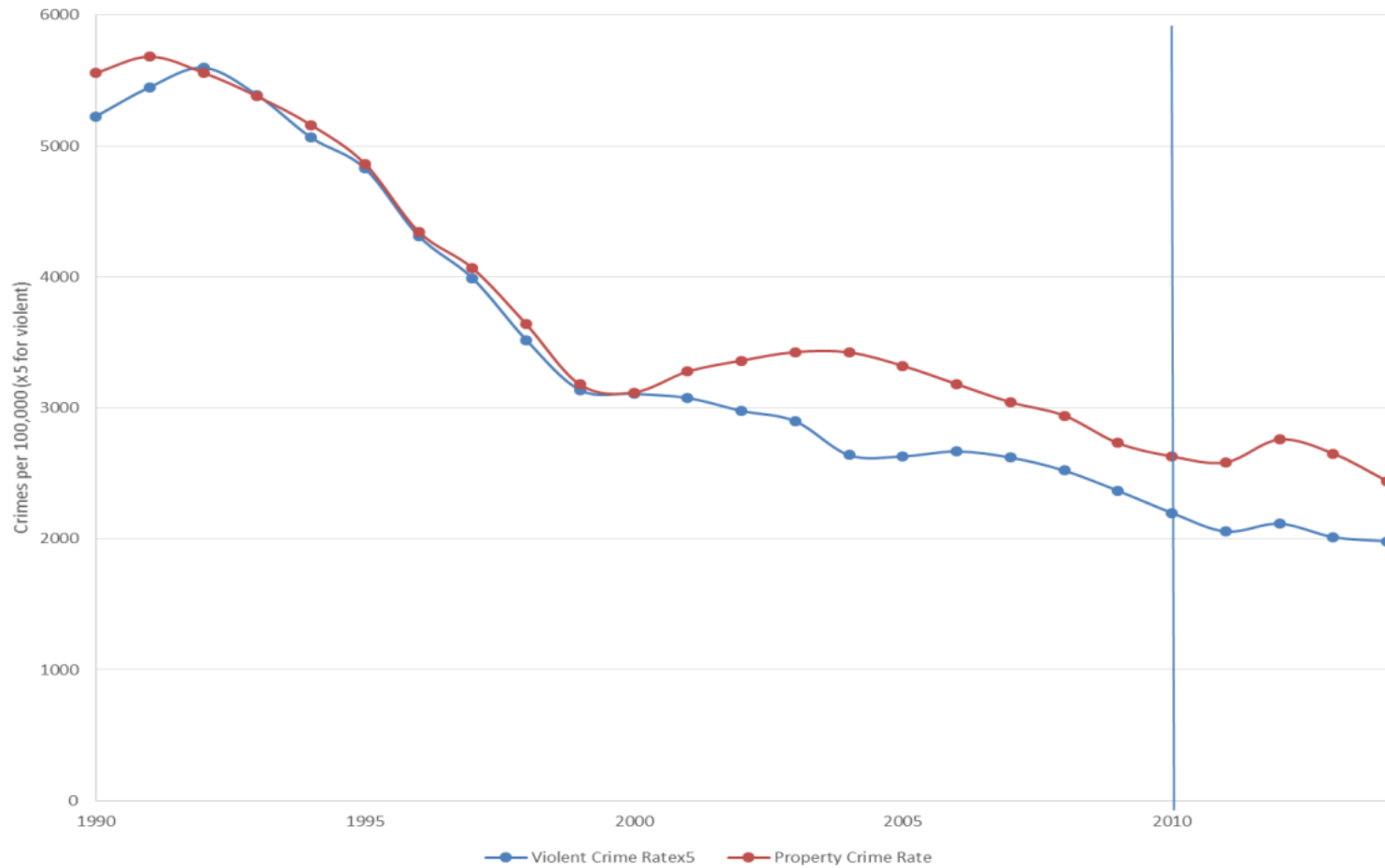
UCR research example: assessing the effects of California corrections reform on state crime rates



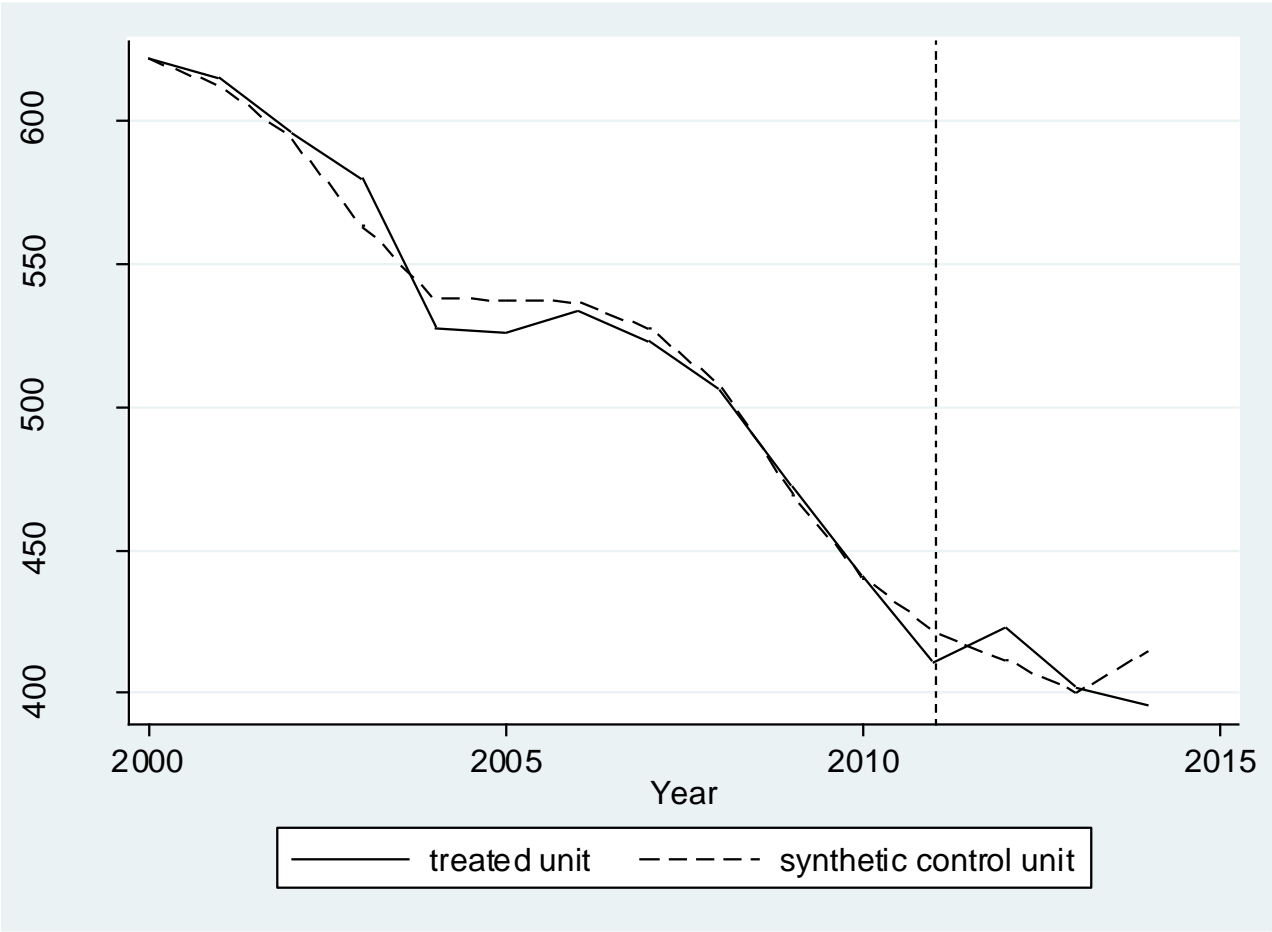
California's Prison Incarceration Rate : 1990 through 2014



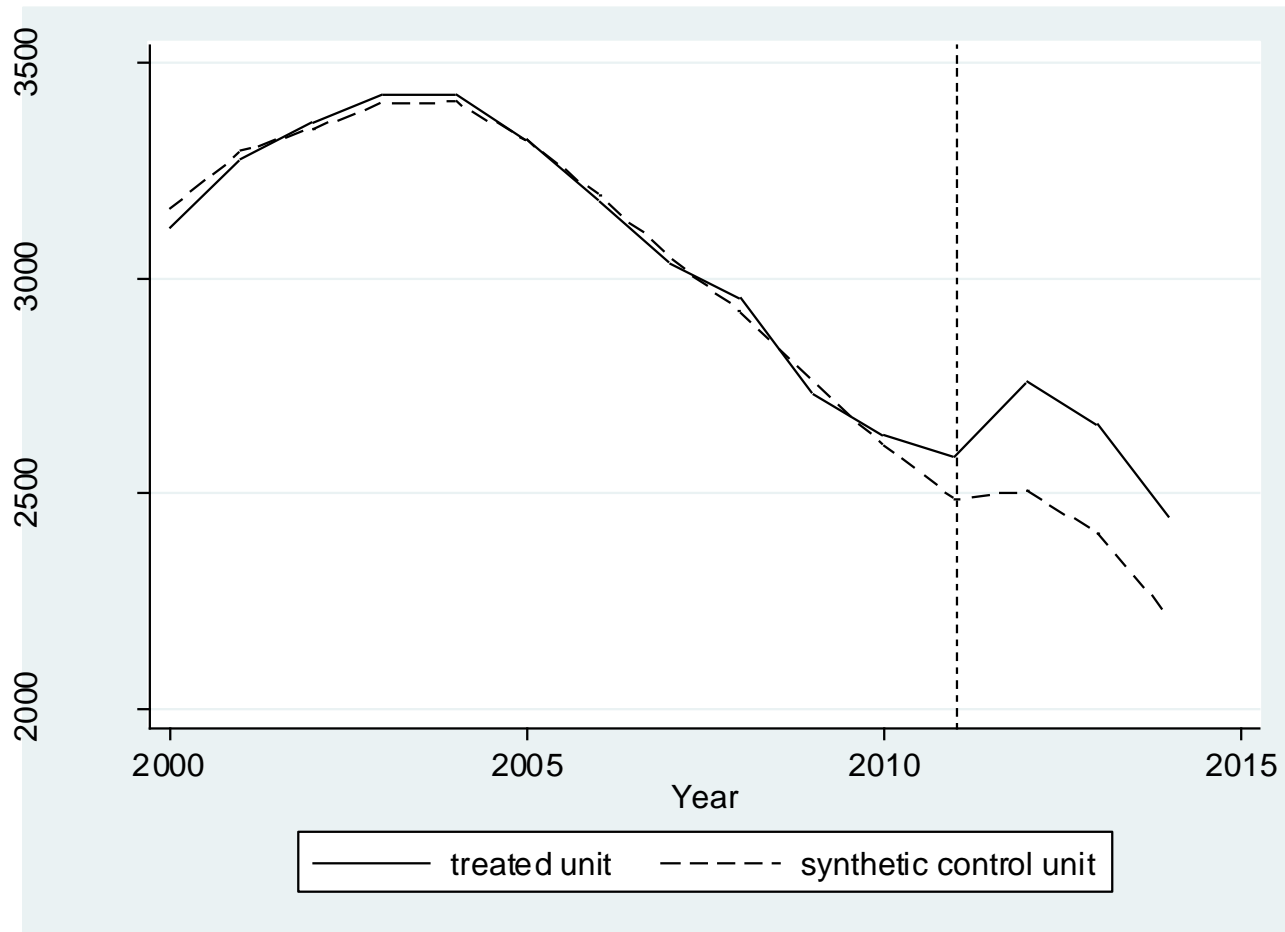
California's Violent Crime Rate (Multiplied by Five) and Property Crime Rate



Violent Crime Rate Trends in California and Synthetic California 2000-2014, with Synthetic Comparison Group and Weighted Identified by Matching on Violent Crime Rates for Each Year Between 2000 and 2010



Property Crime Rate Trends in California and Synthetic California 2000-2014, with Synthetic Comparison Group and Weighted Identified by Matching on Property Crime Rates for Each Year Between 2000 and 2010.



Linking UCR Crime Data to Census Data

- At the state level trivially easy.
- At the county and place level, requires the use of a crosswalk.
 - Census enumerates counties, cities (--i.e., places) using Federal Information Processing Series (FIPS) codes.
 - UCR uses ORI's
 - Need to use the Law Enforcement Agency Identifiers Crosswalk to link two geographies

ICPSR 35158

**Law Enforcement Agency
Identifiers Crosswalk, 2012**

*United States Department of Justice.
Office of Justice Programs. Bureau of
Justice Statistics*

Codebook

Law Enforcement Agency Identifiers Crosswalk, 2012

Variable List

Variable Name	Variable Label	Page
FSTATE	FIPS STATE CODE	10
FCOUNTY	FIPS COUNTY CODE	11
FPLAGE	FIPS PLAGE CODE	11
FIPS_ST	FIPS STATE CODE - ALPHANUMERIC	12
FIPS_COUNTY	FIPS COUNTY CODE - ALPHANUMERIC	12
FIPS	FIPS STATE-COUNTY CODE - ALPHANUMERIC	12
ORIS	ORIGINATING AGENCY IDENTIFIER (3 CHARACTERS) FROM UCR AND NCIC FILES	12
ORIZ	ORIGINATING AGENCY IDENTIFIER (7 CHARACTERS) FROM UCR FILES	12
NAME	AGENCY NAME	13
UA	URBAN AREA/URBAN CLUSTER CODE (AS OF 2010)	13
STATENAME	STATE NAME	13
COUNTYNAME	COUNTY NAME	13
UANAME	URBAN AREA/URBAN CLUSTER NAME (AS OF 2010)	13
PARTOF	AGENCY/ORI IS PART OF LARGER PARENT AGENCY	13
AGCYTYPE	AGENCY TYPE	14
SUBTYPE1	AGENCY SUB-TYPE 1	14
SUBTYPE2	AGENCY SUB-TYPE 2	14
GOVID	CENSUS GOVERNMENT ID (AS OF 2012)	16
LG_NAME	CENSUS GOVERNMENT NAME (AS OF 2012)	16
ADDRESS_NAME	ADDRESS - NAME	16
ADDRESS_STR1	ADDRESS - STREET LINE 1	16
ADDRESS_STR2	ADDRESS - STREET LINE 2	16
ADDRESS_CITY	ADDRESS - CITY	16
ADDRESS_STATE	ADDRESS - STATE	17
ADDRESS_ZIP	ADDRESS - ZIP CODE	17
REPORT_FLAG	ORI REPORTED 1 OR MORE OFFENSES 1985 - 2012	17

AGCYTYPE - AGENCY TYPE

Location: 232-235 (width: 4; decimal: 0)

Variable Type: numeric

Text:

The AGCYTYPE variable classifies LEAIC records similarly to, but not exactly as, the CSLLEA. In particular the CSLLEA uses code 5 to indicate the "Primary state law enforcement agency." The LEAIC excludes the "Primary" distinction. For LEAIC purposes there may be multiple state-level law enforcement agencies.

Records that were not in the CSLLEA were assigned AGCYTYPE codes based on using the agency name to look up similar records in the CSLLEA and using that coding. Records may be categorized in many ways. Data users may wish to develop their own categorization schemes to fit their analytical purposes.

Value	Label
0	Local police department
1	Sheriff's office
5	State law enforcement agency
6	Special jurisdiction
7	Constable/Marshal

Things you can do linking agency level crime data to census data (Kneebone and Raphael 2011)

- 100 largest metropolitan areas
 - Encompass 2/3 of the U.S. population
 - Include roughly 5,400 separate municipalities.
- Aggregate UCR agency-level crime data for 1990, 2000, and 2008 to the city level.
- Match to census data on city-level demographics
- Has the crime decline been even across and within metropolitan areas?

Figure 1: Violent Crimes per 100,000 Residents in the Largest 100 U.S. Metropolitan Areas: All Areas, Central Cities and Non-Central City Areas

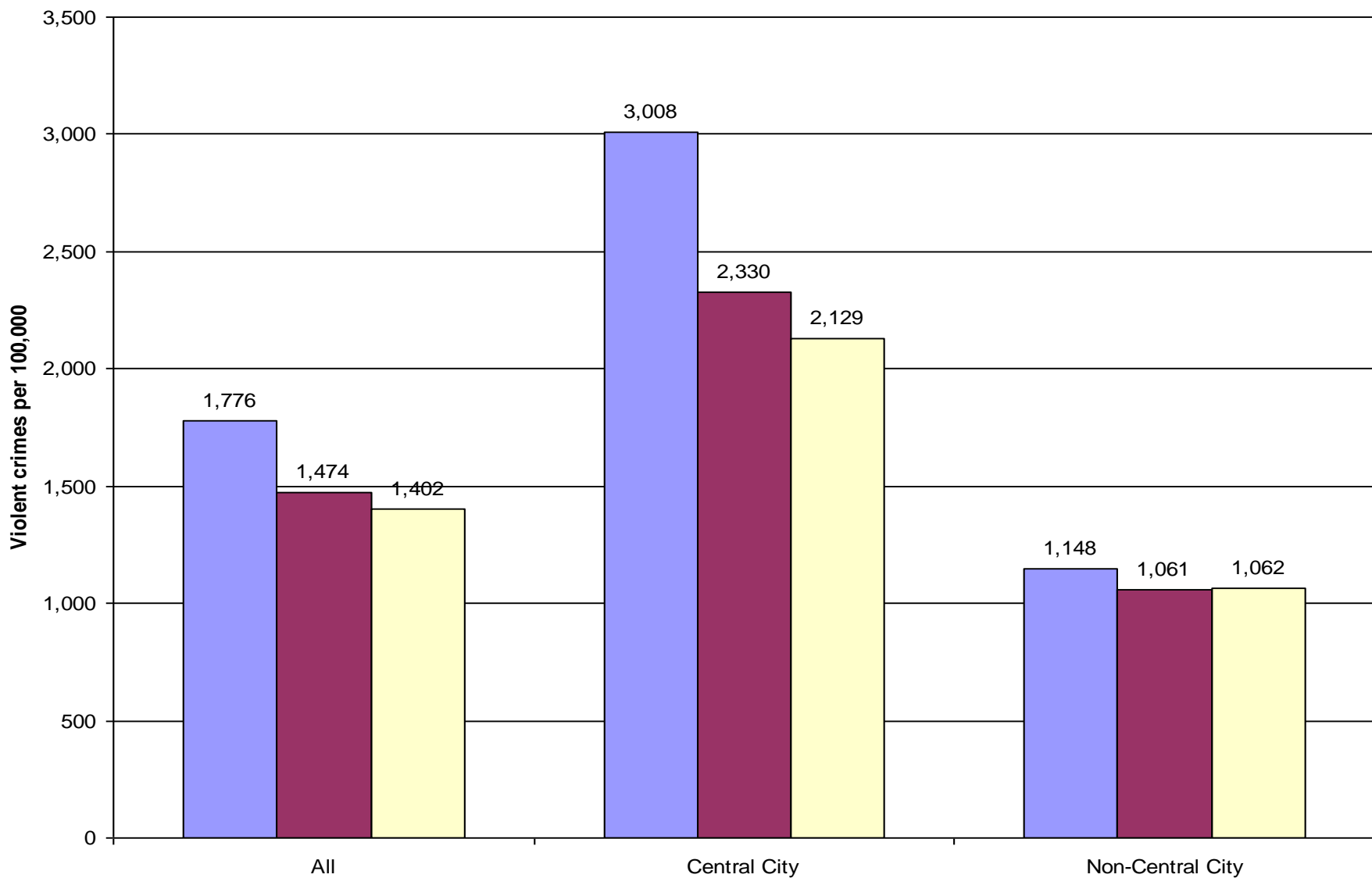


Figure 2: Property Crimes per 100,000 Residents in the Largest 100 U.S. Metropolitan Areas: All Areas, Central Cities and Non-Central City Areas

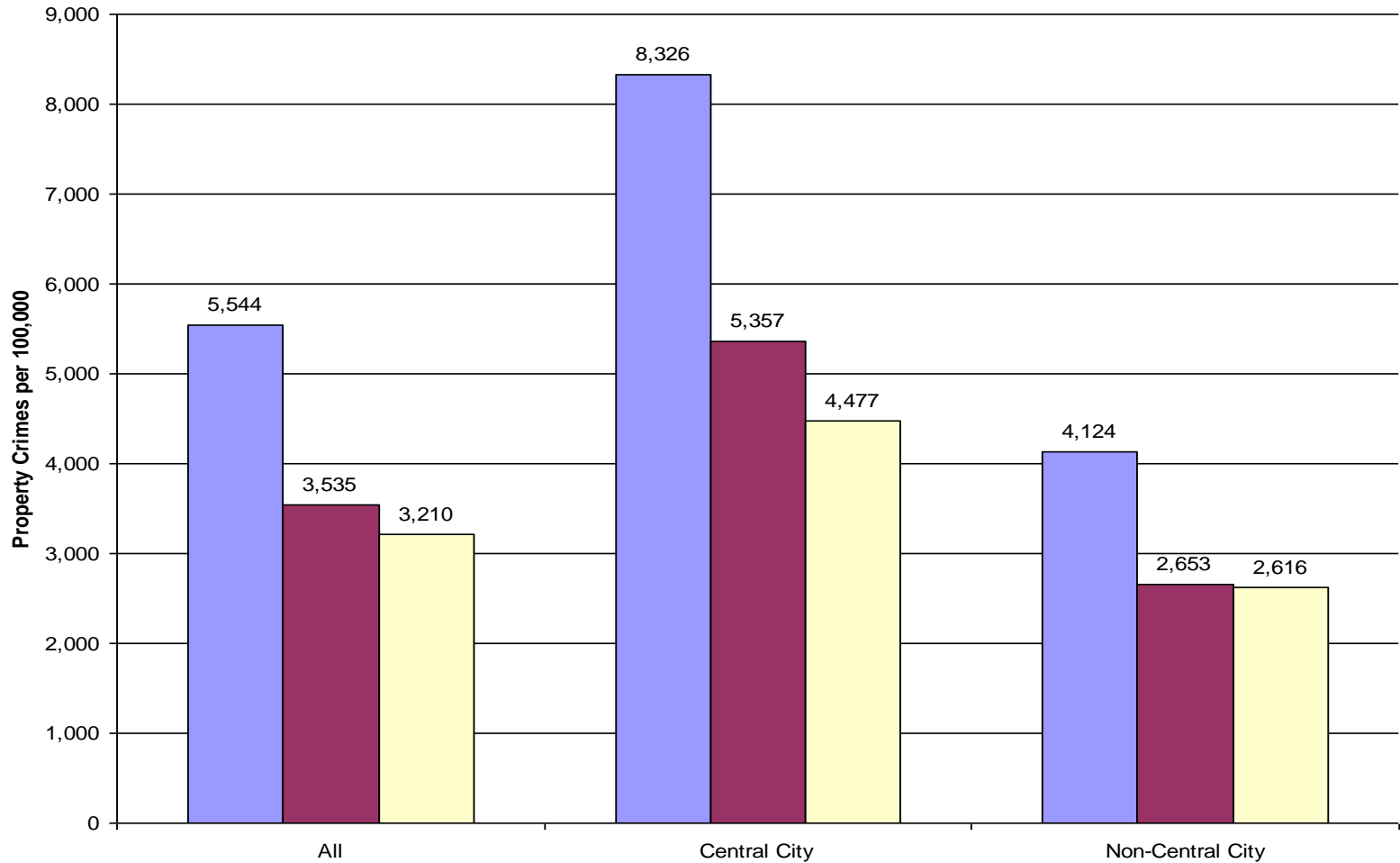


Figure 9: Scatter Plot of City-Level Property Crime Rates Against the Proportion of Residents that Are Black, 1990 (Circles) and 2008 (Diamonds)

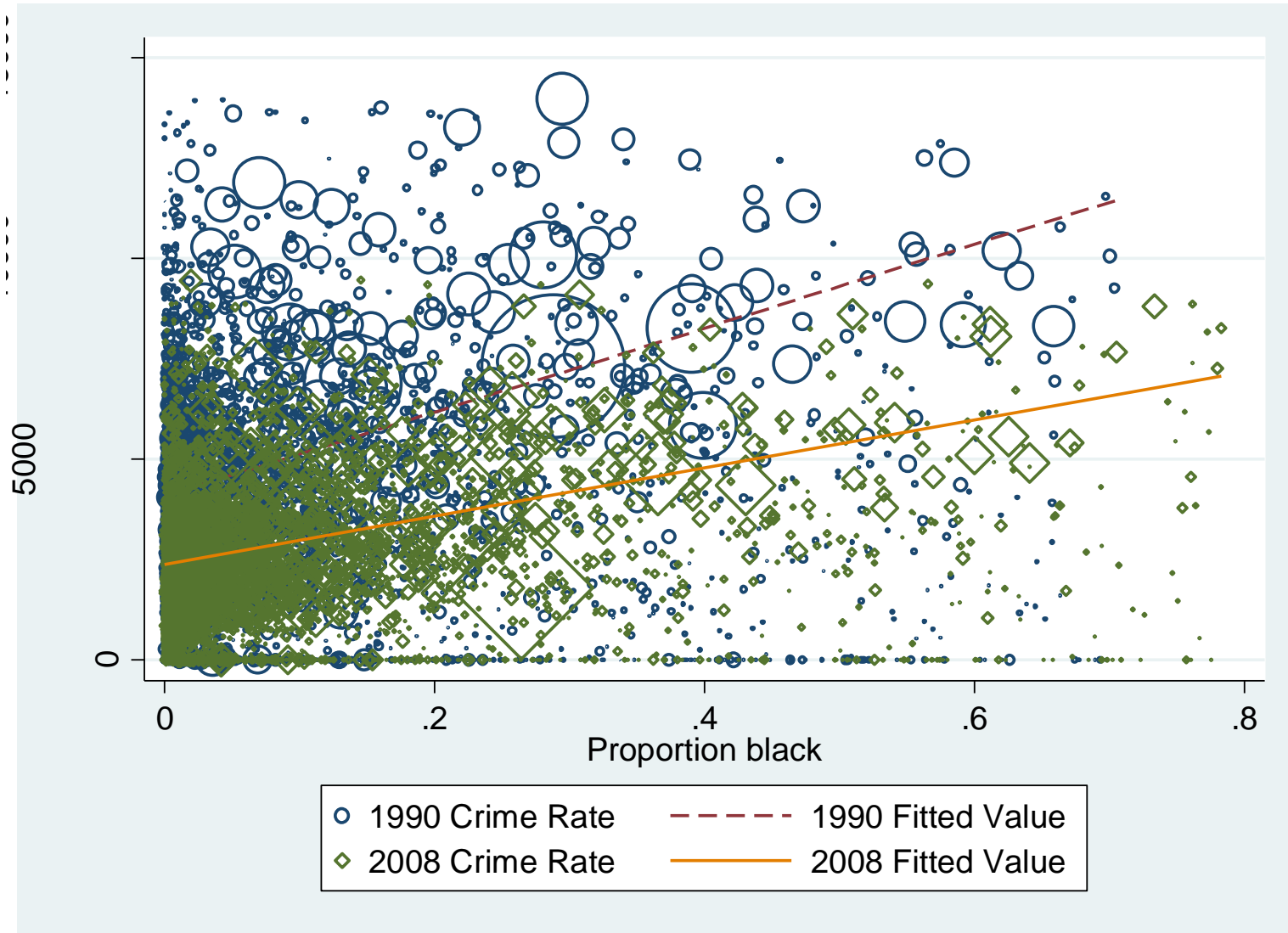


Figure 11: Scatter Plot of City-Level Property Crime Rates Against the Proportion of Residents that Are Poor, 1990 (Circles) and 2008 (Diamonds)

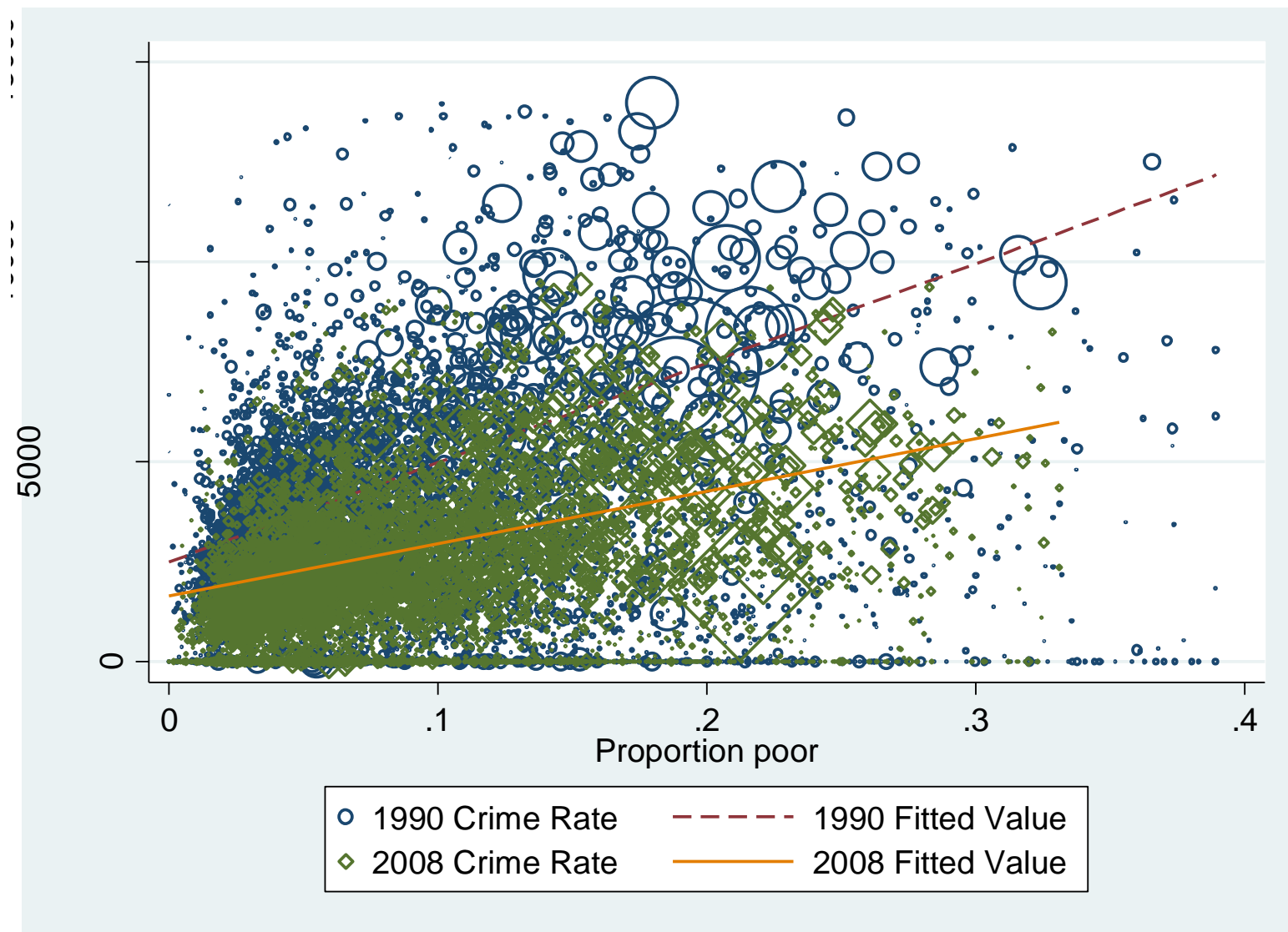


Figure 13: Scatter Plot of City-Level Property Crime Rates Against the Proportion of Residents that Are Hispanic, 1990 (Circles) and 2008 (Diamonds)

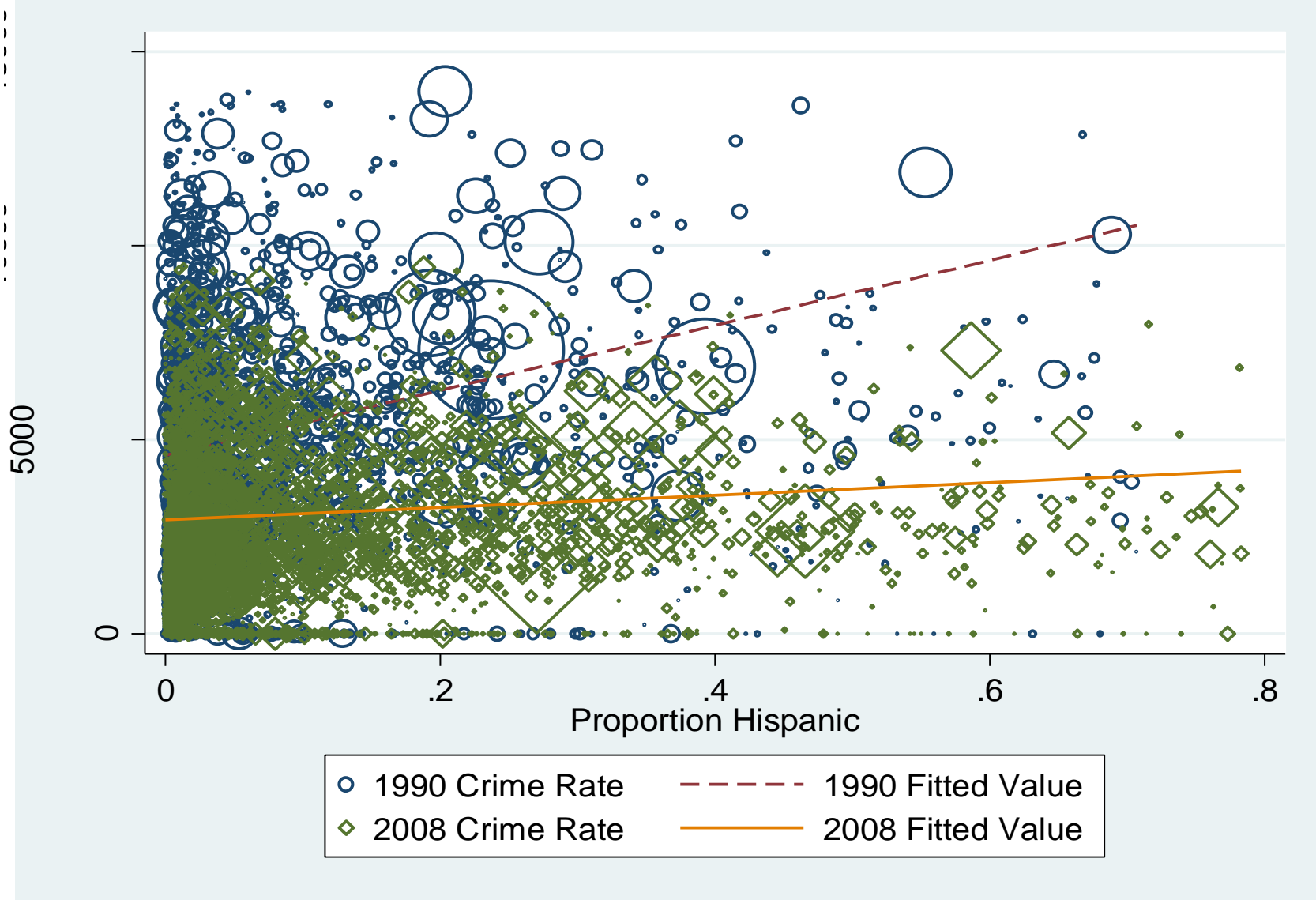
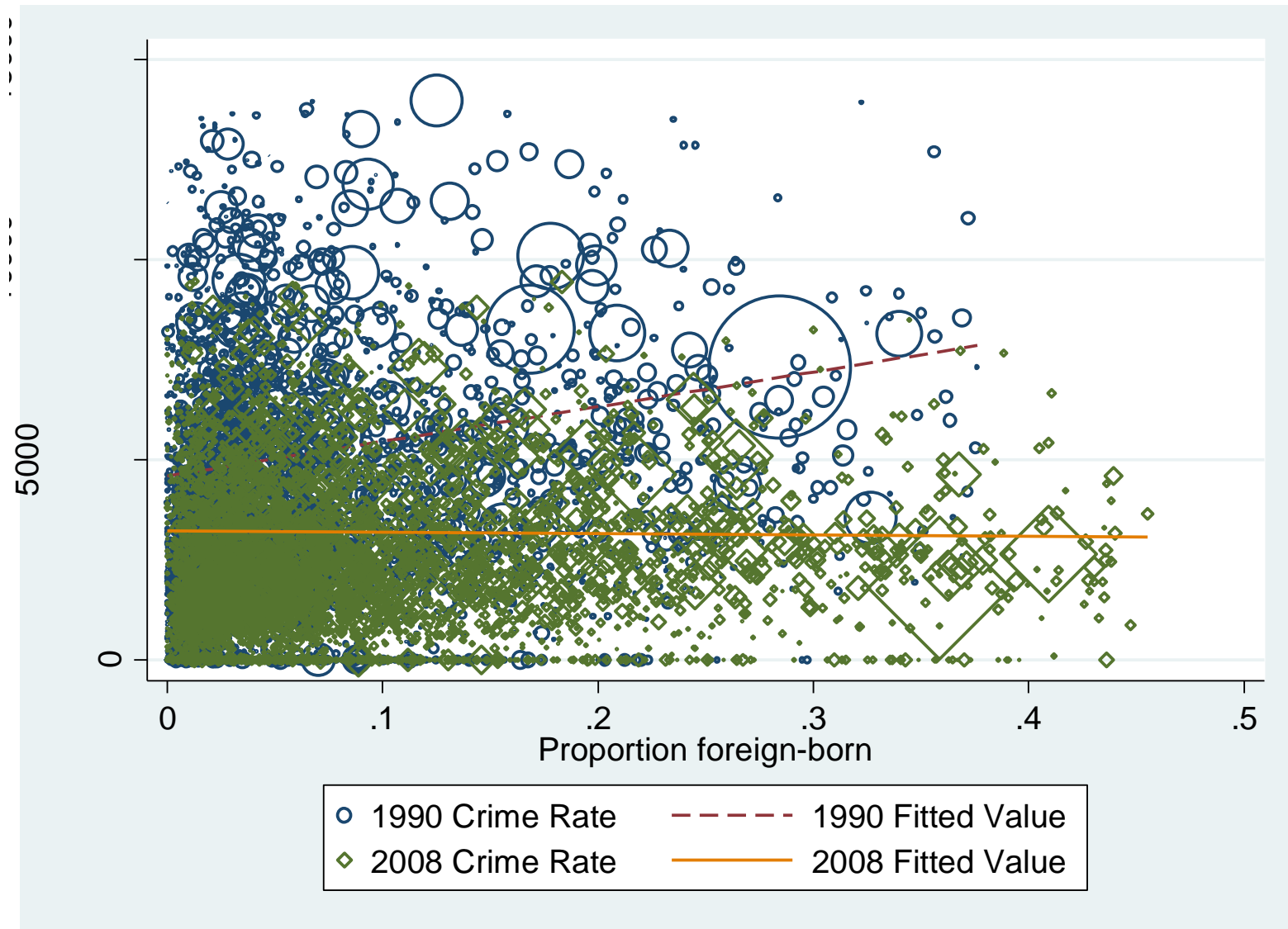


Figure 15: Scatter Plot of City-Level Property Crime Rates Against the Proportion of Residents that Are Foreign-Born, 1990 (Circles) and 2008 (Diamonds)



Some thoughts on some of the other UCR data products

- Property stolen and recovered
 - Supplemental reports that show value of stolen and recovered property by offense type and value of stole and recovered property by property type (cash, jewelry etc). Additional information on offense circumstances
 - Under-utilized
 - Is robbery/burglary less profitable?
 - How has the value of cash stolen changed through time?
 - Can these trends be linked to ATM use? The spread of EBT?

Supplemental Homicide Reports

- Provides microlevel information on each homicide incident including victim and (when possible) offender characteristics, incident circumstances.
- Includes information on homicides involving law enforcement: classified as “felon killed by police”
 - Data could be used to study trends and agency-level variation in arrest-related deaths.

Arrests by Age, Sex, and Race

- Contains summary level information by month on arrests for part 1 and part 2 offenses (Hierarchy rule applies to arrests with multiple offenses), race, age (single year below 24), sex, and race x sex for juvenile/adult aggregation.
- Disposition information for juveniles:
 - Handled within department and released
 - Referred to juvenile court or probation department
 - Referred to welfare agency
 - Referred to other police agency
 - Referred to criminal or adult court

California's Monthly Arrest and Citation Register

- Microlevel arrest records back to 1980
- Detail on arrestee age, race, ethnicity, gender, offense, arrest-disposition, arrest type (citation, booking, other), and arresting agency.
- Over 60 million records.
- May become publicly available through the California Attorney General's Open Justice Data initiative
 - <http://openjustice.doj.ca.gov/>
 - Currently includes microdata on deaths in custody.

Figure 10: Proportion of Male Arrest Resulting in a Booking for Arrests of Individuals 30 and Under by Race/Ethnicity (Based on Arrest Made between 2010 and 2014)

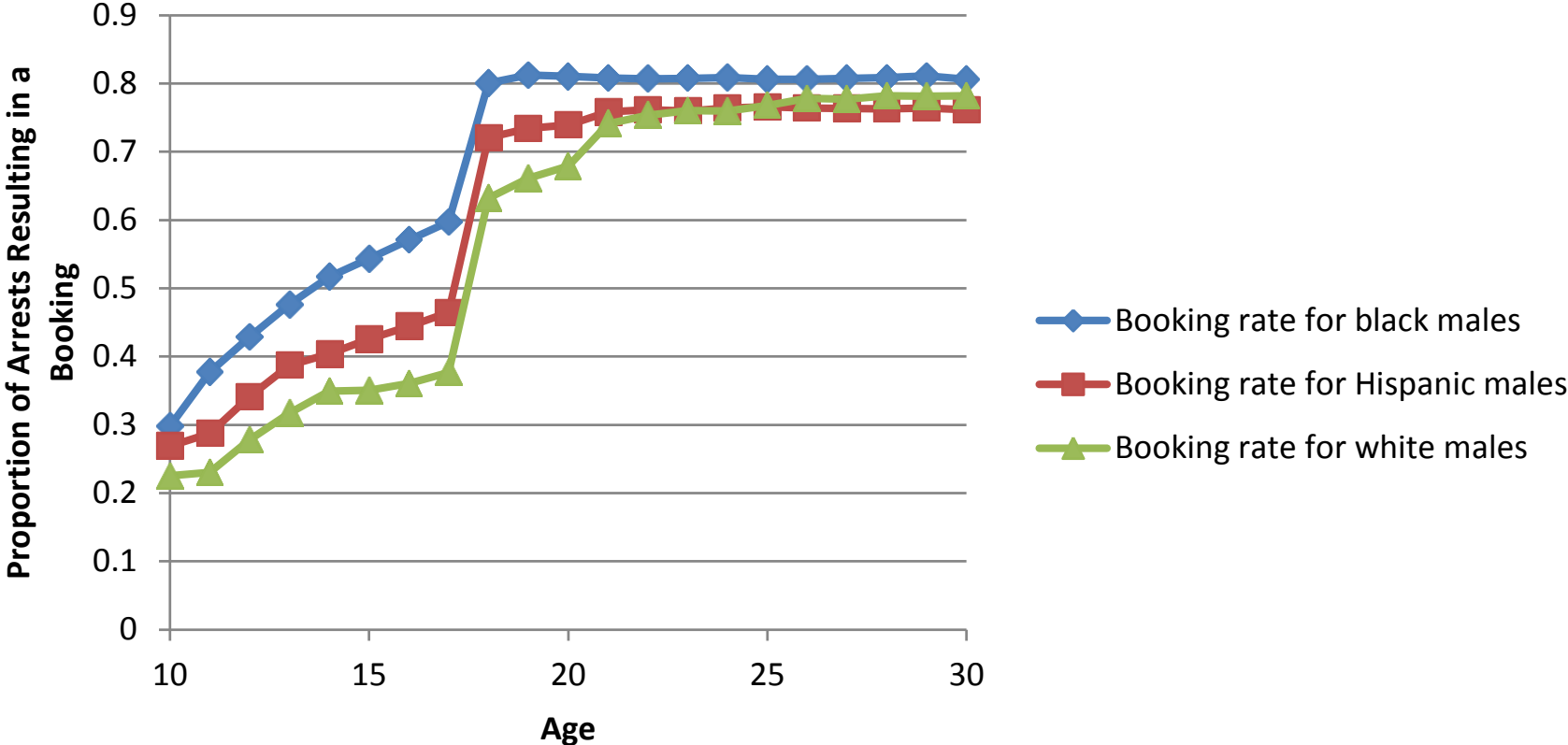


Figure 11: Proportion of Female Arrest Resulting in a Booking for Arrests of Individuals 30 and Under by Race/Ethnicity (Based on Arrest Made between 2010 and 2014)

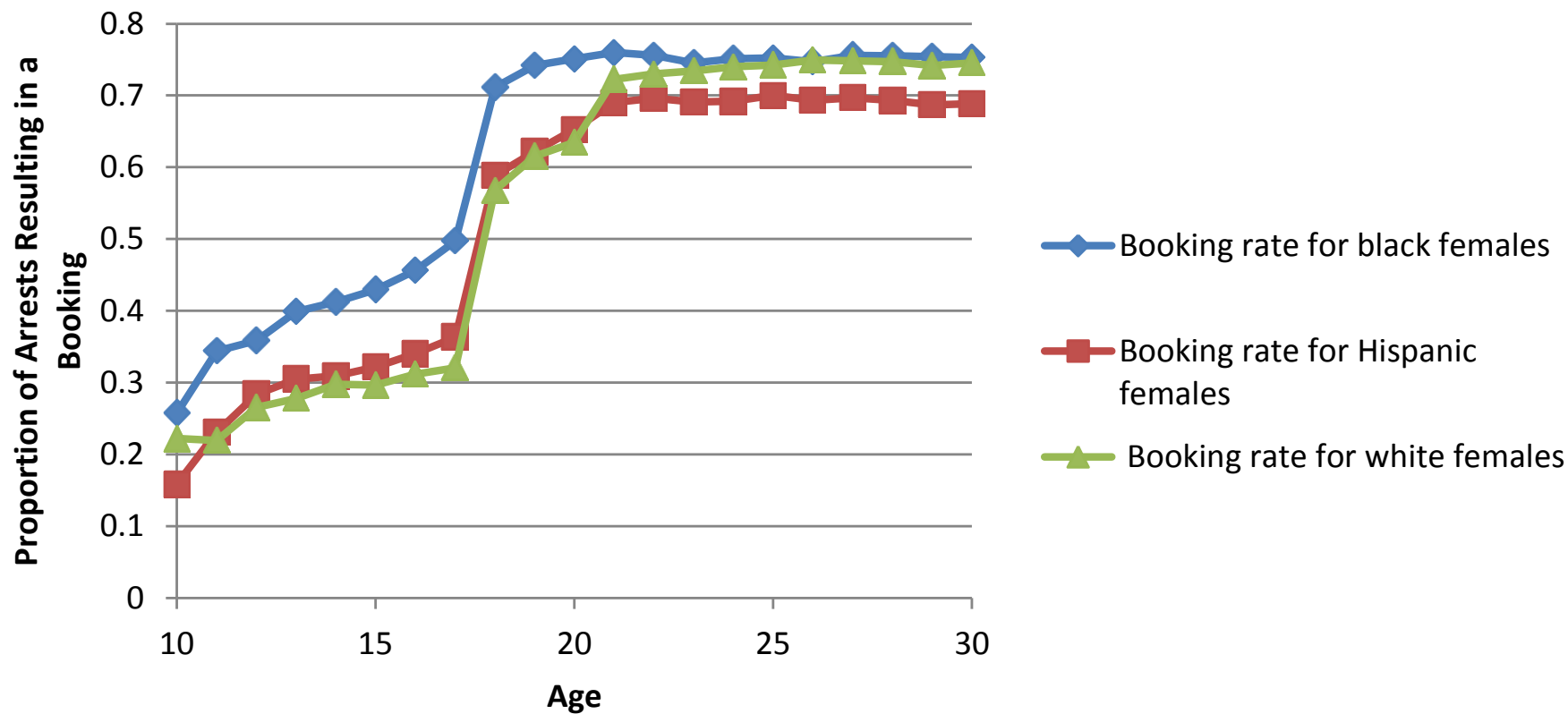


Figure 14: Differences in the Percent of Arrests Resulting in a Booking, African Americans minus either Whites or Blacks With and Without Statistical Adjustment for Arrest Offense and Agency Reporting the Arrest, Juvenile Males

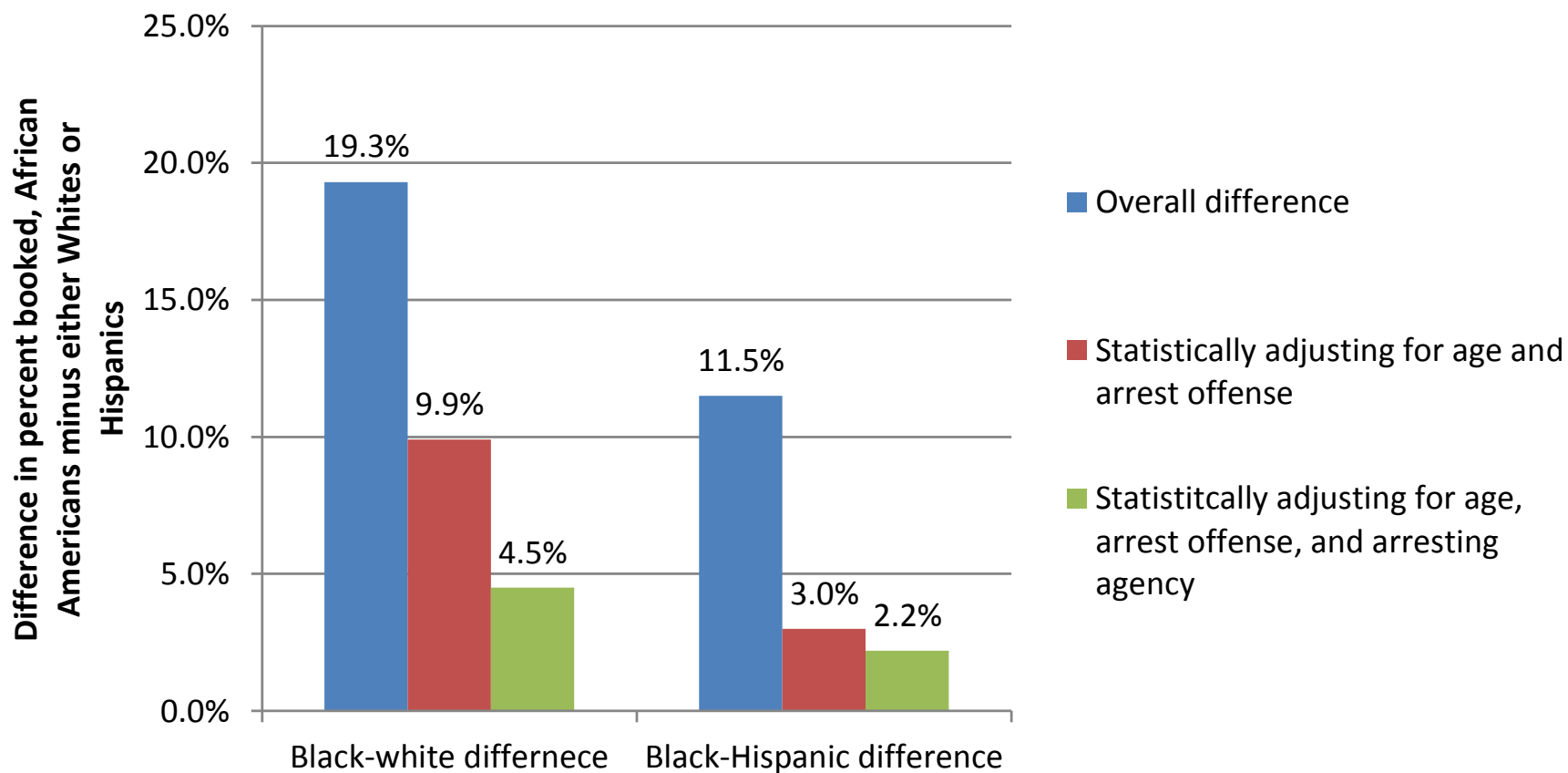


Figure 15: Differences in the Percent of Arrests Resulting in a Booking, African Americans minus either Whites or Blacks With and Without Statistical Adjustment for Arrest Offense and Agency Reporting the Arrest, Juvenile Females

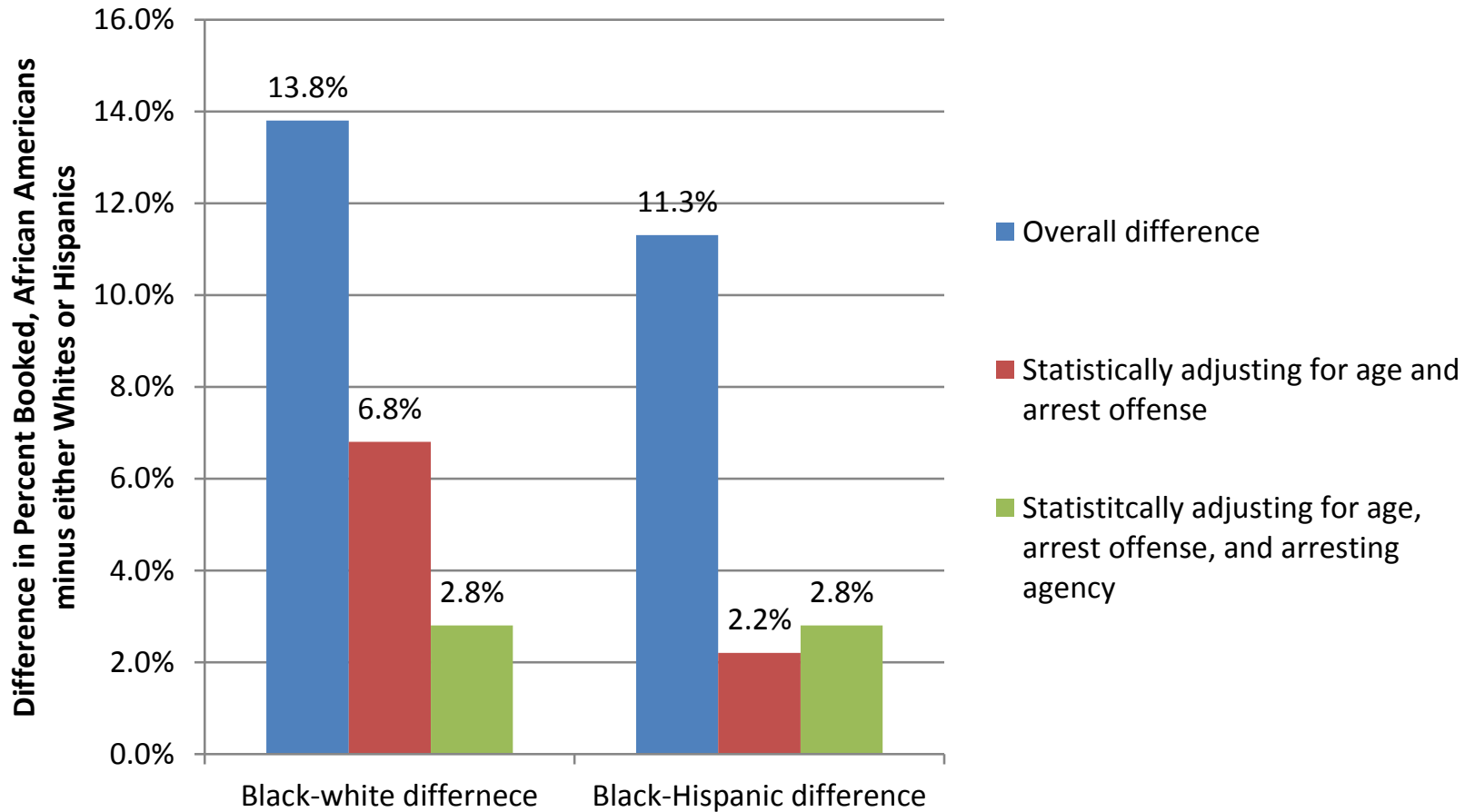


Figure 16: Differences in the Percent of Arrests Resulting in a Booking, African Americans minus either Whites or Blacks With and Without Statistical Adjustment for Arrest Offense and Agency Reporting the Arrest, Adult Males

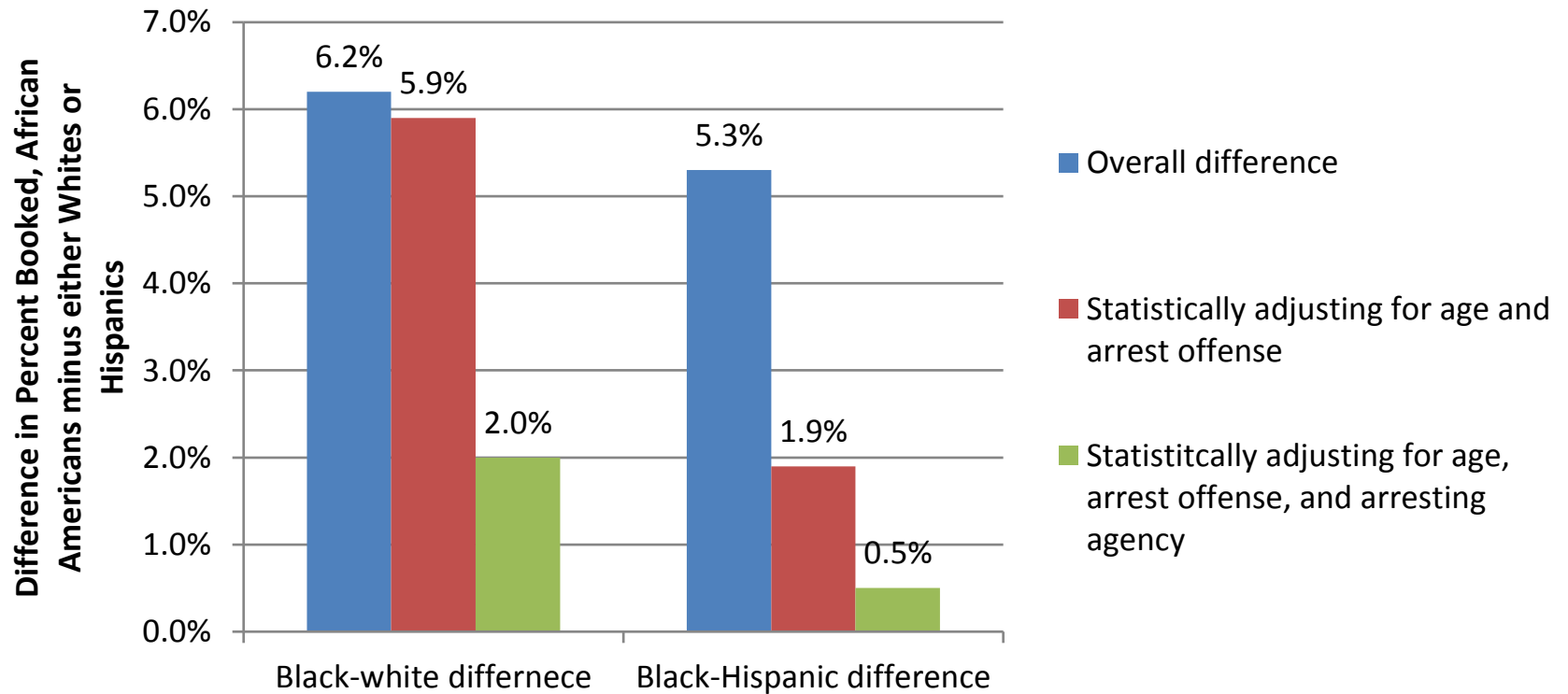
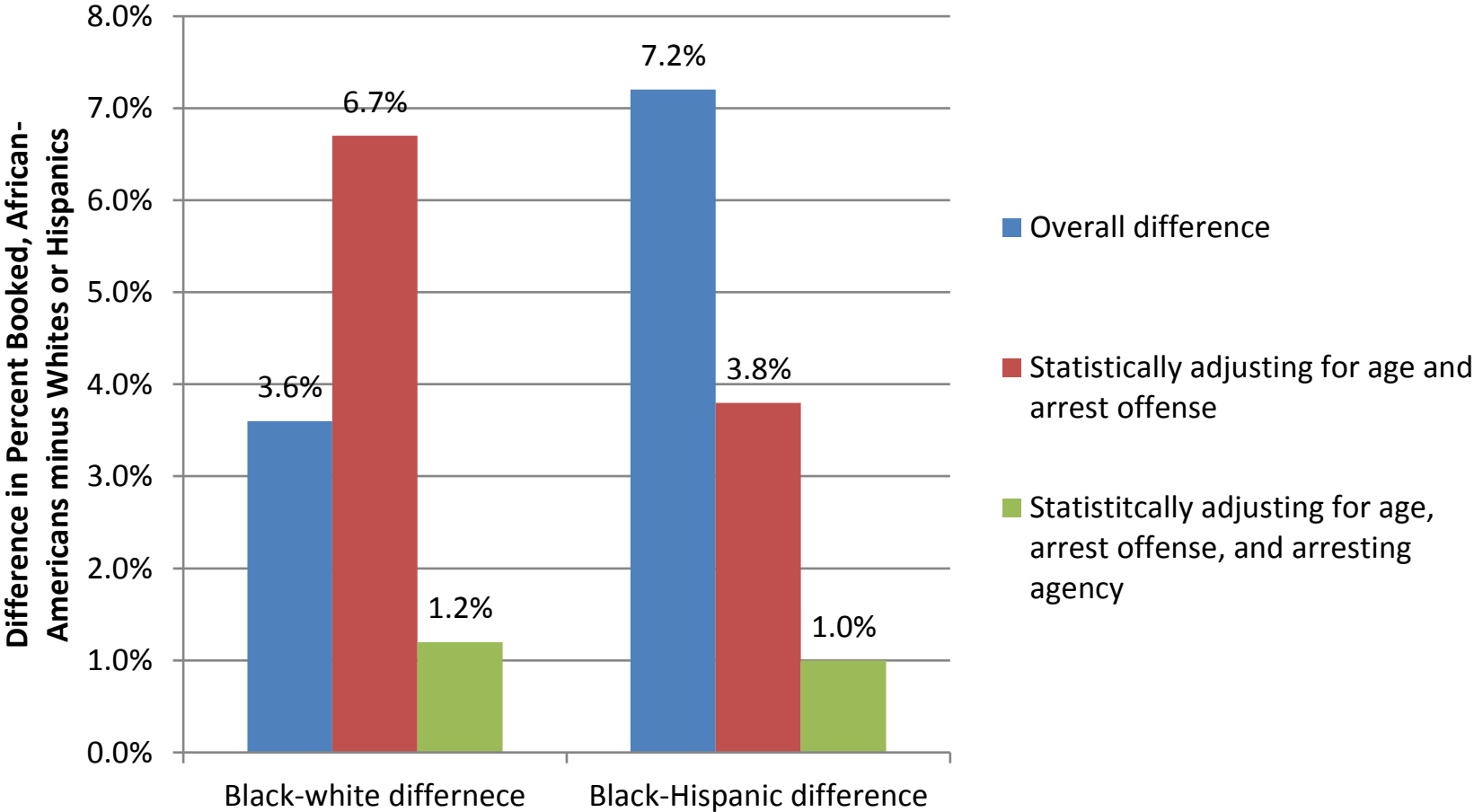


Figure 17: Differences in the Percent of Arrests Resulting in a Booking, African Americans minus either Whites or Blacks With and Without Statistical Adjustment for Arrest Offense and Agency Reporting the Arrest, Adult Females



National Incident Based Reporting System (NIBRS)

- Alternative manner of reporting crime data to the FBI
- Based on local incident based reporting systems.
- Collects more detailed information at the incident level that ultimately can (and is) tabulated into the standard UCR summary level reports.
- Cleaned incident level records posted in NACJDR webpage (ICPSR University of Michigan).

Data segments in the NIBRS (drawn from James, Nathan and Logan Rishard (2008), *How Crime in the United States is Measured*," Congressional Research Service Report for Congress RL 34309)

Appendix D. NIBRS Data Elements²⁹⁰

Administrative Segment

1. ORI number²⁹¹
2. Incident number
3. Incident date/hour
4. Cleared exceptionally
5. Exceptional clearance date

Offense Segment

- [1. ORI number]
- [2. Incident number]
6. UCR offense code
7. Offense attempted/completed
8. Offender(s) suspected of using
- 8A. Bias motivation
9. Location type
10. Number of premises entered
11. Method of entry
12. Type of criminal activity/gang information
13. Type of weapon/force involved

Property Segment

[1. ORI number]

[2. Incident number]

14. Type property loss/etc.

15. Property description

16. Value of property

17. Date recovered

18. Number of stolen motor vehicles

19. Number of recovered motor vehicles

20. Suspected drug type

21. Estimated drug quantity

22. Type drug measurement

Victim Segment

- [1. ORI number]
- [2. Incident number]
- 23. Victim (sequence) number
- 24. Victim connected to UCR offense code(s)
- 25. Type of victim
- 26. Age (of victim)
- 27. Sex (of victim)
- 28. Race (of victim)
- 29. Ethnicity (of victim)
- 30. Resident status (of victim)
- 31. Aggravated assault/homicide circumstances
- 32. Additional justifiable homicide circumstances
- 33. Type injury
- 34. Offender number(s) to be related
- 35. Relationship(s) of victim to offender(s)

Offender Segment

- [1. ORI number]
- [2. Incident number]
- 36. Offender (sequence) number
- 37. Age (of offender)
- 38. Sex (of offender)
- 39. Race (of offender)

Arrestee Segment

- [1. ORI number]
- [2. Incident number]
- 40. Arrestee (sequence) number
- 41. Arrest (transaction) number
- 42. Arrest date
- 43. Type of arrest
- 44. Multiple Arrestee Segments Indicator
- 45. UCR arrest offense code
- 46. Arrestee was armed with
- 47. Age (of arrestee)
- 48. Sex (of arrestee)
- 49. Race (of arrestee)
- 50. Ethnicity (of arrestee)
- 51. Resident status (of arrestee)
- 52. Disposition of arrestee under 18

Innovative Use of the NBIRS: Owens, Emily (2015), “Testing the School to Prison Pipeline,” University of Pennsylvania Working Paper.

- Assesses the effects of the introduction of new school resource officers on reported crime rates and arrest rates occurring at school and not at school.
- Makes use of the incident level detail to separately measure school and non-school arrests, arrests by age, race ORI.
- Merges to data on Cops in Schools (CIS) grants made by the granted to localities through the Department of Justice’s Community Oriented Policing Services (COPS) department.
 - Grant program created under the 1994 Violent Crime Control and Law Enforcement Act.
- Uses CIS grants to identify exogenous variation in school resource officer staffing levels.

Figure 2: Arrests per 10,000 people by Age and CIS grant status, Outside of Schools

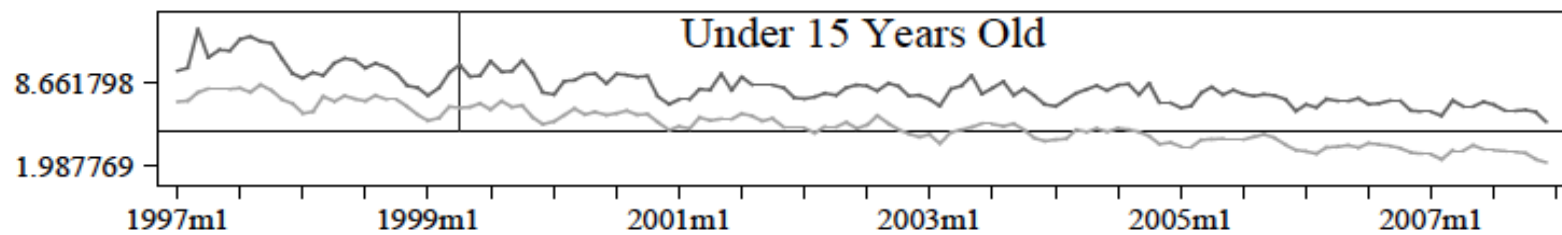
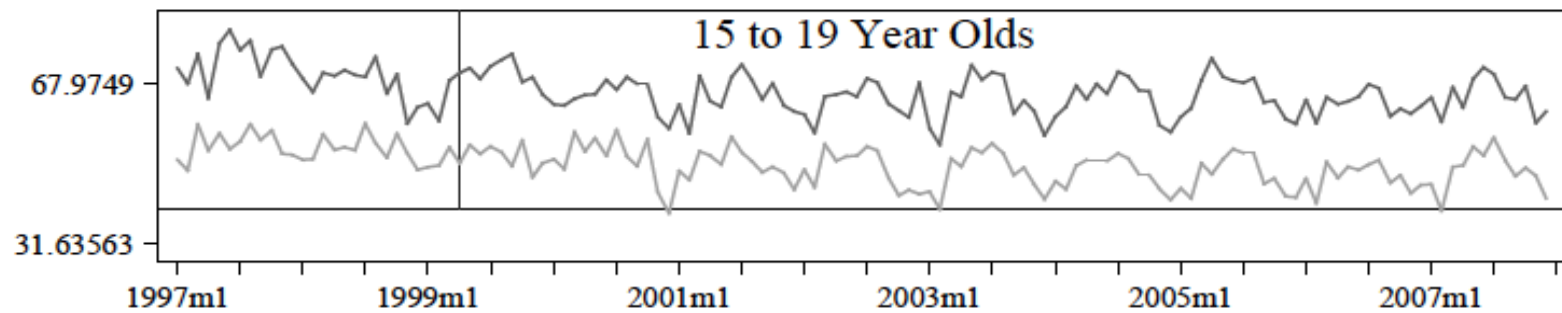
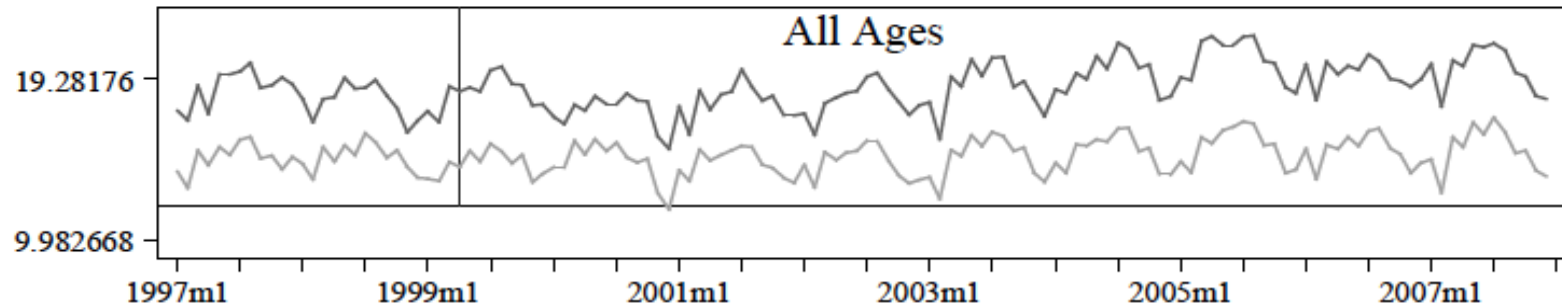
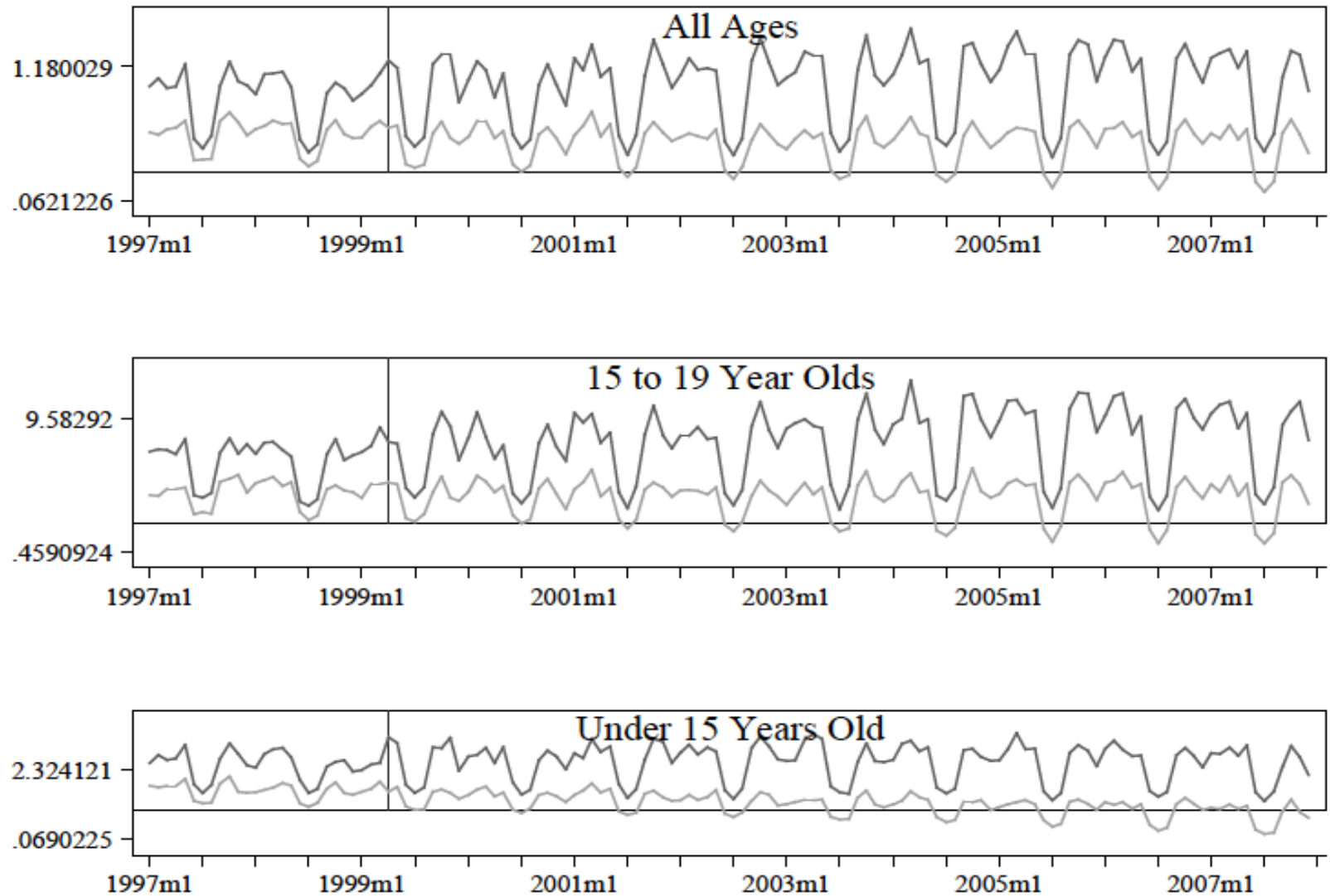


Figure 3: Arrests per 10,000 people by Age and CIS grant status, Inside of Schools



Criminal Procedure Data

- Not much public use data at the micro level.
- Information on case processing for convicted felons available in the National Judicial Reporting Program.
 - Data for roughly 350 counties, and random sample of felons convicted in these counties
 - Survey conducted every two years since 1988
 - Detailed information on sentences of convicted felons.
 - Relatively large data set (430,000 observations in 2000, cases from almost every state).
 - Have to apply for access from ICPSR
- Not much detail in these data on criminal history.

Harris, Alexis; Evans, Heather and Katherine Beckett (2010), “Drawing Blood From Stones: Legal Debt and Financial Inequality in the Contemporary United States,” *American Journal of Sociology*, 115(6): 1753-1799.

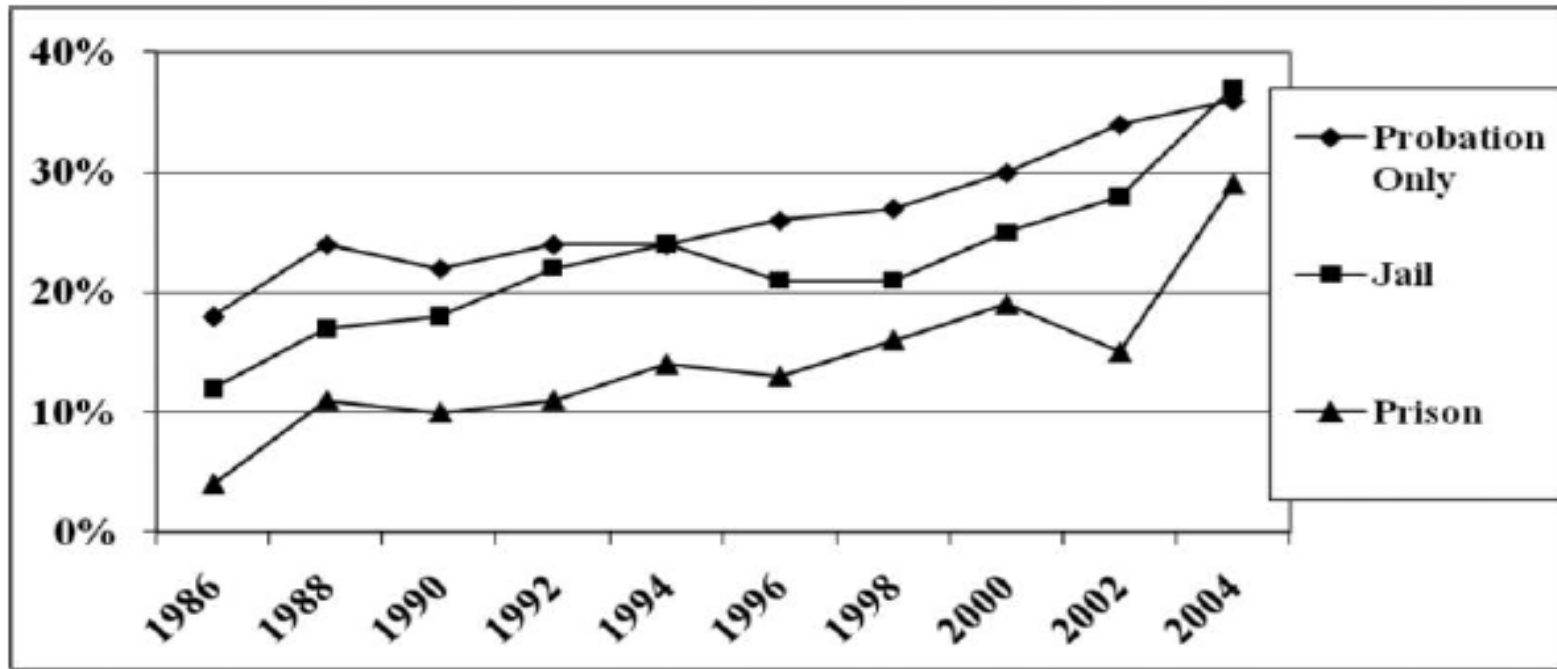


FIG. 2.—Percentage of convicted felons with fines by sentence type, 1986–2004. Sources: Authors' compilations; data from the Bureau of Justice Statistics, *Felony Sentences in State Courts*, 1986–2004.

- Cross county analysis of sentencing heterogeneity?
- Impact of realignment on sentencing outcomes.
- Are fines and imprisonment substitutes or complements?

ICPSR 3802

**National Judicial Reporting
Program, 2000**

*United States Department of Justice.
Office of Justice Programs. Bureau of
Justice Statistics*

Codebook

US Sentencing Commission Individual Offender Data Files

- Microlevel records on individuals sentenced in federal court
- Detailed information on case characteristics, criminal history, sentence severity, augmentations associated with aggravating characteristics, sentences, departures from guidelines, offender demographics.
- Available for many years are US Sentencing Commission Webpage
 - <http://www.ussc.gov/research-and-publications/commission-datafiles#individual>

State Court Processing Statistics (SCPS): Felony Defendants in Large Urban Counties (1990-2009)

- Sample of 40 of the largest 75 counties in the country
- Random sample (in small jurisdiction, universe) of felony filings in May of survey year.
- Follows case through to disposition or one full year (whichever comes first)
- Includes information on
 - Arrest charge, adjudication charge, conviction charge
 - Conviction and sentencing outcomes
 - Criminal history (pretty extensive information), criminal justice status at time of arrest for sampled offense
 - Pre-trial proceedings (detention, bail, diversion to specialty courts)
 - Pre-trial misconduct

U.S. Sentencing Commission (2004), *Fifteen Years of Guidelines Sentencing: An Assessment of How Well the Federal Criminal Justice System is Achieving the Goals of Sentencing Reforms*

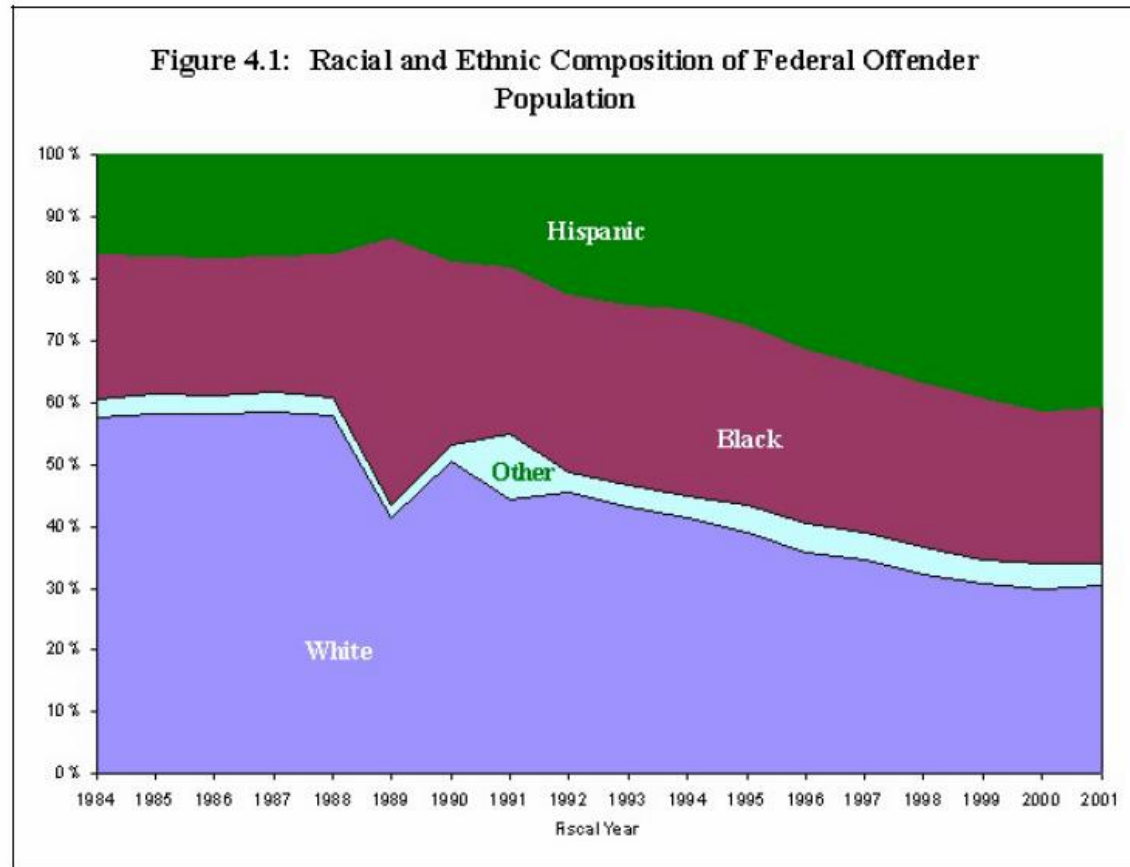
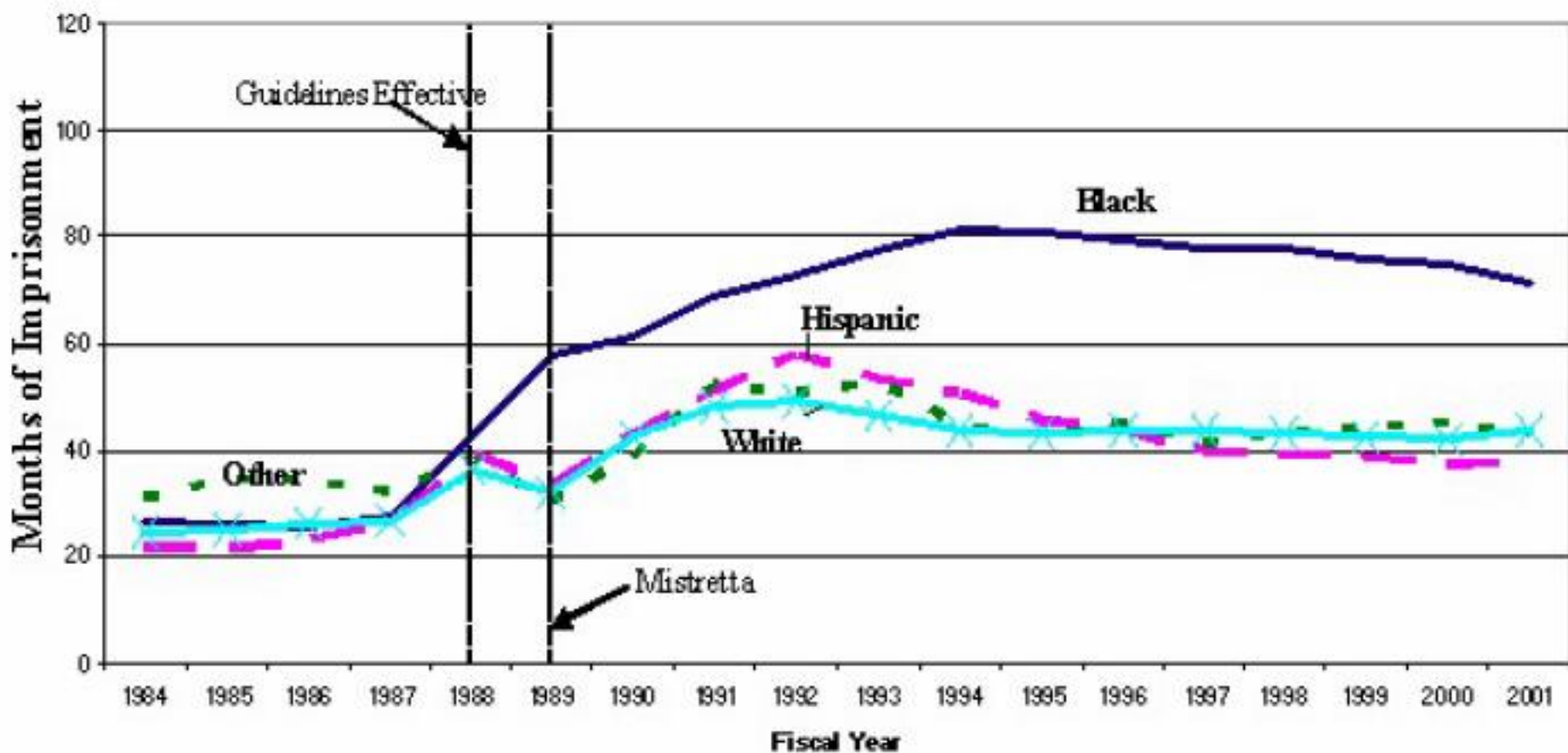


Figure 4.2: Estimated Time Served by Various Racial and Ethnic Groups 1984-2001



Mustard, David (2001), "Racial, Ethnic, and Gender Disparities in Sentencing: Evidence from the U.S. Federal Courts," *Journal of Law and Economics*, 44(1): 285-314

TABLE 5

AVERAGE CRIMINOLOGICAL VARIABLES BY RACE, ETHNICITY, AND GENDER

	White	Black	Hispanic	Others	Male	Female
Sentence in months	32.06	64.09	54.12	32.45	51.52	18.51
Offense level	15.48	19.01	19.94	15.08	18.30	13.11
Criminal history	1.81	2.37	1.87	1.51	2.10	1.37
N	35,943	22,398	16,256	2,639	64,320	12,916

NOTE.—Data are from the United States Sentencing Commission for individuals who were sentenced in the federal courts between October 1, 1991, and September 30, 1994. Average sentences do not reflect people who were sentenced to life imprisonment.

TABLE 6
SENTENCING DISPARITIES IN UNITED STATES SENTENCING COMMISSION

	All Cases (1)	All Cases (2)	Guideline Cases (3)	Guideline Cases (4)
Black	5.50** (.338)	4.81** (.352)	2.43** (.289)	2.16** (.302)
Hispanic	4.47** (.422)	2.54** (.492)	-.71 (.374)	-.86* (.434)
Other	2.31** (.818)	1.39* (.828)	-.51 (.690)	-.55 (.700)
Female	-5.51** (.375)	-5.47** (.379)	-1.77** (.325)	-1.80** (.329)

Limitations of SCPS

- Nothing on misdemeanor offenses
 - But can study felony arrest charges that plead down to misdemeanor
- Cannot study the charging decision
 - Sample based on felony filings

Bjerk, David (2005), "Making the Crime Fit the Penalty: The Role of Prosecutorial Discretion Under Mandatory Minimum Sentences," *Journal of Law and Economics*, 48: 591-625.

TABLE 4
PROBABILITY OF BEING PROSECUTED FOR A MISDEMEANOR

DEFENDANTS	PRELAW		POSTLAW		DIFFERENCE
	N	Coefficient	N	Coefficient	
Arrested for three-strikes crime	1,289	.055 (.007)	437	.093 (.014)	.038** (.015)
Arrested for "other" felony	15,281	.129 (.003)	6,448	.122 (.004)	-.007 (.005)
Difference in difference					.045** (.016)

NOTE.— The sample includes all defendants in three-strikes states with nonmissing or pending adjudication outcomes and valid data for the level of the adjudicated charge, any conviction offense, and criminal history (if from a three-strikes state). Statistics are weighted using the weights provided by the *State Court Processing Statistics* to be representative of the nation's 75 most populous counties. Standard errors are in parentheses.

** Significant at the 1% level.

TABLE 6
PROBABILITY OF BEING PROSECUTED FOR A MISDEMEANOR,
CALIFORNIA ONLY AND EXCLUDING CALIFORNIA

DEFENDANTS	PRELAW		POSTLAW		DIFFERENCE
	<i>N</i>	Coefficient	<i>N</i>	Coefficient	
California only:					
Arrested for three-strikes crime	948	.050 (.008)	286	.094 (.017)	.044** (.019)
Arrested for other felony	6,468	.095 (.004)	2,519	.106 (.006)	.011 (.007)
Difference in difference					.033 ⁺ (.020)
Not including California:					
Arrested for three-strikes crime	341	.069 (.014)	151	.092 (.024)	.023 (.028)
Arrested for other felony	8,813	.154 (.004)	3,929	.132 (.006)	-.022** (.007)
Difference in difference					.045 ⁺ (.027)

NOTE.—The sample includes all defendants in three-strikes states with nonmissing or pending adjudication outcomes and valid data regarding the level of the adjudicated charge, any conviction offense, and criminal history (if from a three-strikes state). Statistics are weighted using the weights provided by the *State Court Processing Statistics* to be representative of the nation's 75 most populous counties. Standard errors are in parentheses.

⁺ Significant at the 10% level.

** Significant at the 1% level.

Effects of Pre-Trial Detention on Sentencing Outcomes (Domínguez and Raphael, Eventually)

Table 1

Adjudication Outcomes by Whether the Individual is Detained Pre Trial

	Released	Detained	Diff: Detained – Released
Guilty	0.502	0.738	0.236 ^a
	(0.002)	(0.002)	(0.003)
Guilty plea	0.478	0.693	0.214 ^a
	(0.002)	(0.002)	(0.003)
Case still pending after 1 year	0.158	0.051	-0.107 ^a
	(0.001)	(0.001)	(0.002)

Table 2
Proportion Prison by Whether the individual is detained Pre-Trial and by Most Serious Offense charge

Most Serious offense Charge	Released		Detained		Diff, Detained-Released	
	Murder	0.385	(0.034)	0.444	(0.016)	0.059
Rape	0.386	(0.015)	0.604	(0.015)	0.218	(0.021) ^a
Robbery	0.434	(0.008)	0.667	(0.006)	0.233	(0.010) ^a
Assault	0.367	(0.005)	0.632	(0.006)	0.265	(0.008) ^a
Other violent	0.473	(0.009)	0.669	(0.010)	0.196	(0.013) ^a
Burglary	0.559	(0.006)	0.788	(0.005)	0.228	(0.008) ^a
Larceny-Theft	0.524	(0.005)	0.806	(0.006)	0.282	(0.008) ^a
Motor vehicle theft	0.492	(0.011)	0.787	(0.009)	0.295	(0.014) ^a
Forgery	0.588	(0.009)	0.796	(0.012)	0.208	(0.017) ^a
Fraud	0.527	(0.009)	0.754	(0.015)	0.227	(0.019) ^a
Other property	0.502	(0.008)	0.761	(0.010)	0.259	(0.013) ^a
Drug sales	0.568	(0.004)	0.813	(0.004)	0.245	(0.006) ^a
Other Drug	0.469	(0.004)	0.737	(0.005)	0.268	(0.006) ^a
Weapons	0.539	(0.009)	0.760	(0.011)	0.221	(0.015) ^a
Diving-related	0.687	(0.008)	0.892	(0.009)	0.205	(0.015) ^a
Other public-order	0.523	(0.009)	0.724	(0.010)	0.201	(0.014) ^a

Table 5

Linear Probability Model Estimates of the Effect of pre-Trial Detention on the Likelihood of a Guilty Verdict, a Guilty Plea, and the Likelihood that the Case is Still Pending After One Year

Panel A: Full Sample

Guilty	0.231 ^a	0.194 ^a	0.172 ^a
	(0.008)	(0.007)	(0.007)
Guilty plea	0.209 ^a	0.173 ^a	0.161 ^a
	(0.009)	(0.009)	(0.007)
Case still pending after one year	-0.104 ^a	-0.104 ^a	-0.102 ^a
	(0.005)	(0.005)	(0.005)
Basic Controls	N	Y	Y
Year-County-Offense effects	N	N	Y

Panel B: Sample Restricted to Those with a Set and Observable Bail Amount

Guilty	0.237 ^a	0.206 ^a	0.186 ^a
	(0.011)	(0.01)	(0.008)
Guilty plea	0.225 ^a	0.196 ^a	0.179 ^a
	(0.011)	(0.011)	(0.008)
Case still pending after one year	-0.125 ^a	-0.136 ^a	-0.124 ^a
	(0.007)	(0.008)	(0.007)
Basic Controls	N	Y	Y
Year-County-Offense effects	N	N	Y

Table 6**Linear Probability Model Estimates of the Being Emergency Released on the Likelihood of a Guilty Verdict, a Guilty Plea, and the Likelihood that the Case is Still Pending After One Year****Panel A: Full Sample**

Guilty	-0.163***	-0.124***	-0.112***
	(0.036)	(0.027)	(0.0248)
Guilty plea	-0.119*	-0.0678	-0.0754*
	(0.0493)	(0.0349)	(0.0292)
Case still pending after one year	0.123***	0.110***	0.122***
	(0.0219)	(0.02)	(0.0239)
Basic Controls	N	Y	Y
Year-County-Offense effects	N	N	Y

ICPSR 2038

**State Court Processing Statistics,
1990-2009: Felony Defendants in
Large Urban Counties**

*United States Department of Justice.
Office of Justice Programs. Bureau of
Justice Statistics*

Codebook for 1990-2009 Cumulative Data

Public Use Corrections Data

- National Corrections Reporting Program, begins in 1984
- Survey of Inmates in State and Federal Correctional Facilities (various years, last 2004, one in the field).
- Survey of Inmates in Local Jails (since '72, irregular intervals but roughly every five or six years).

Yang, Crystal S. (2015), “Local Labor Markets and Criminal Recidivism,” Working Paper Harvard Law School

- Uses NCRP releases and admissions data linked over thirteen years by individual. Analyzes recidivism outcomes for roughly 35 million releases (for about 4 million offenders).
- Uses county of commitment as proxy for county of release.
- Links release events to county employment and wages for quarter of release
- Tests for whether economics conditions at release impact recidivism outcomes.

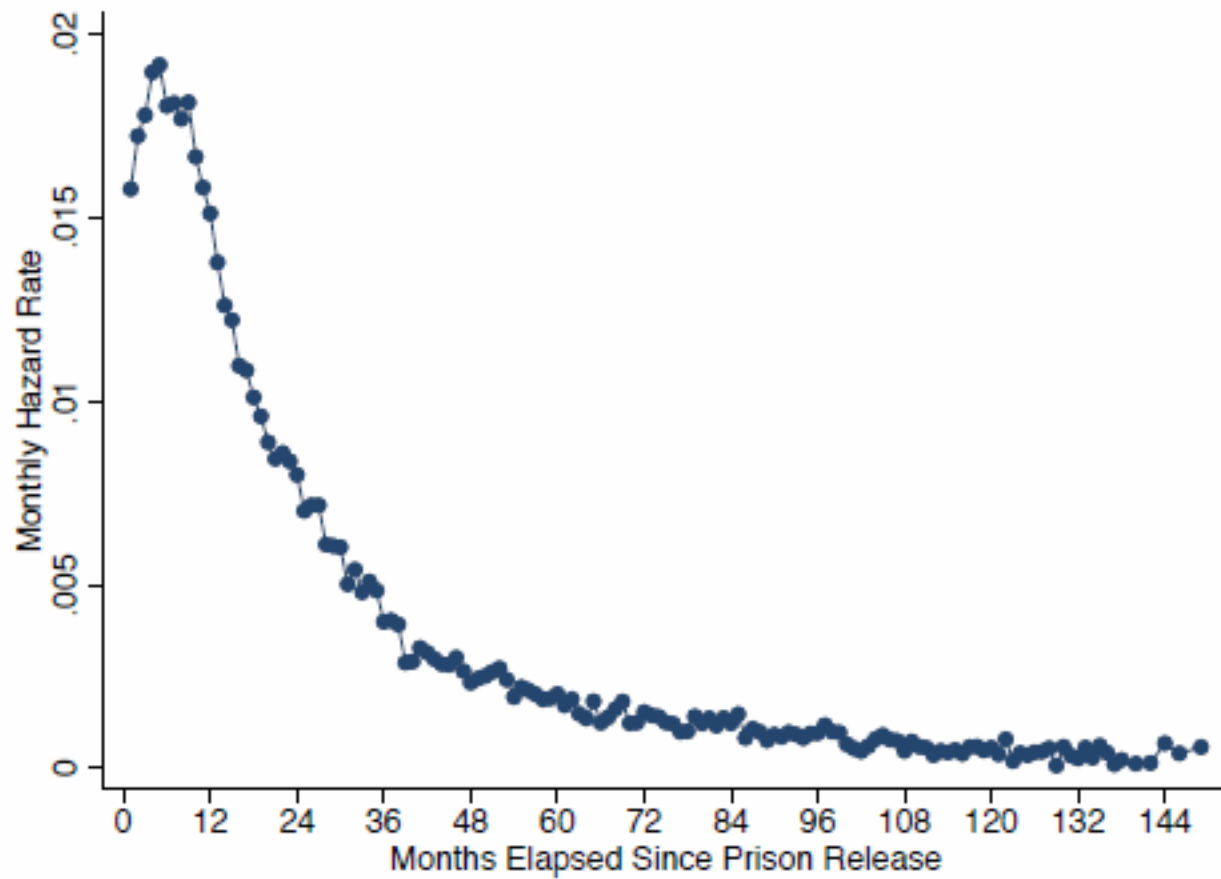


Figure 1. Hazard for Probability of Returning to Prison

Table 3. Main Results

	(1)	(2)	(3)	(4)	(5)
Black	0.109*** (0.002)	0.159*** (0.003)	0.099*** (0.002)	0.159*** (0.003)	0.159*** (0.003)
Not Hispanic	0.404*** (0.005)	0.219*** (0.006)	0.414*** (0.005)	0.220*** (0.006)	0.220*** (0.006)
Female	-0.291*** (0.003)	-0.310*** (0.003)	-0.291*** (0.003)	-0.309*** (0.003)	-0.309*** (0.003)
HS Degree	-0.027*** (0.005)	-0.078*** (0.005)	-0.024*** (0.005)	-0.078*** (0.005)	-0.078*** (0.005)
Some College	-0.098*** (0.007)	-0.150*** (0.007)	-0.097*** (0.007)	-0.150*** (0.007)	-0.150*** (0.007)
College Degree	-0.261*** (0.017)	-0.296*** (0.017)	-0.259*** (0.017)	-0.296*** (0.017)	-0.296*** (0.017)
Age at Release	-0.041*** (0.001)	-0.044*** (0.001)	-0.042*** (0.001)	-0.044*** (0.001)	-0.044*** (0.001)
No Prior Felony	-0.290*** (0.003)	-0.465*** (0.003)	-0.295*** (0.003)	-0.466*** (0.003)	-0.466*** (0.003)
Time Served (Years)	-0.008*** (0.001)	-0.008*** (0.001)	-0.008*** (0.001)	-0.009*** (0.001)	-0.009*** (0.001)
<i>Labor Market Variables</i>					
Log Low-Skill Emp.	-0.021*** (0.001)	-0.053*** (0.014)			0.048*** (0.015)
Log Low-Skill Wage			-0.378*** (0.008)	-0.396*** (0.019)	-0.413*** (0.020)
Observations	34,911,191	34,911,191	34,916,231	34,916,231	34,911,191
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
County Fixed Effects	No	Yes	No	Yes	Yes

Notes: This table presents proportional hazard estimates for the full sample of prisoners released between 2000-2013 in 43 states. Each column represents a separate regression. Specifications include demographic, offense, and prison admittance and entry characteristics. Standard errors are clustered at the offender level.

Tahamont, Sarah (2014), "The Effect of Visitation on Prison Misconduct," Working Paper.

- Uses data from the SISFC to investigate whether prisoners who receive family visits have fewer incidents of prisoner misconduct
- Exploit distance between home and prison where one is located to identify this relationship.

Figure 1: Proportion of inmates Visited By Distance from Home

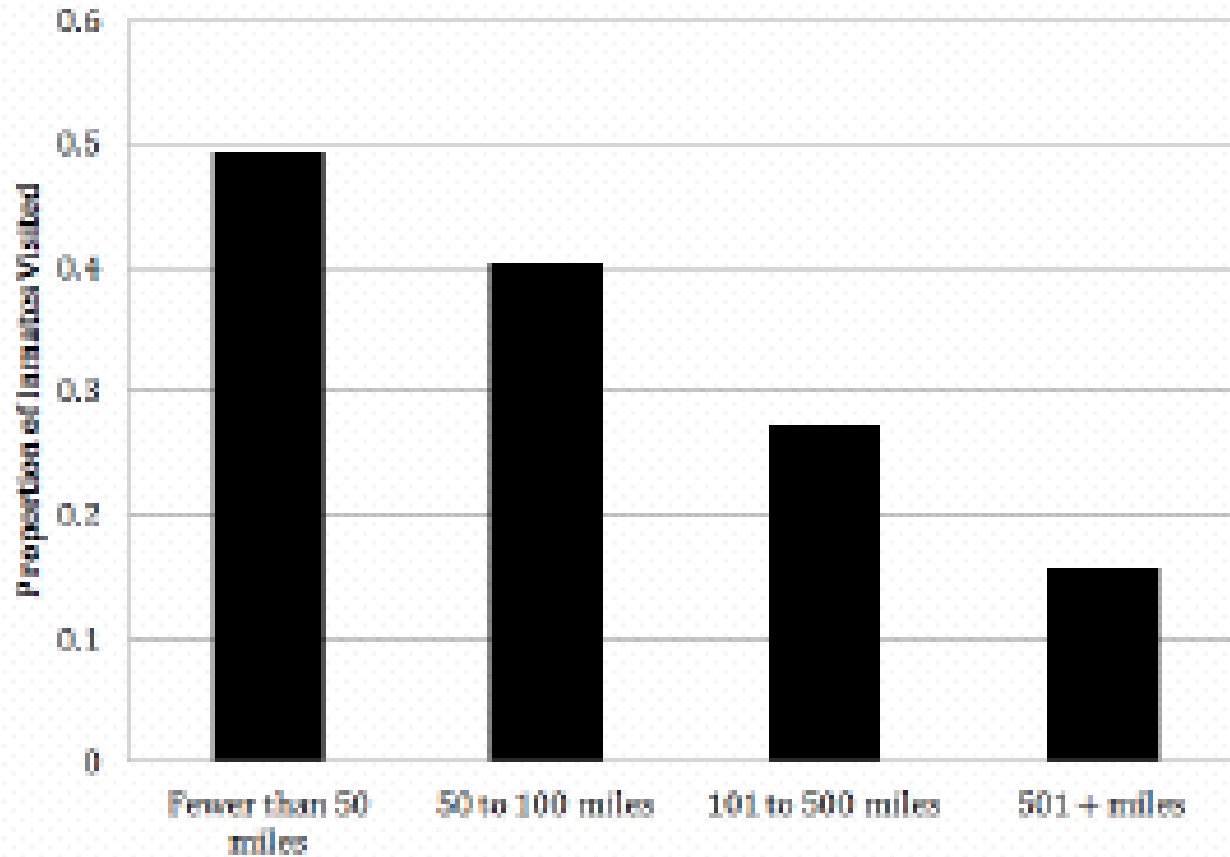


Table 8: Estimates of the Effect of Visitation on Prison Misconduct, OLS and 2SLS

	(1)	(2)	(3)	(4)	(5)	(6)
Any Violation	-0.001 (0.018)	-0.244*** (0.081)	-0.003 (0.013)	-0.154*** (0.053)	-0.007 (0.011)	-0.086* (0.046)
Total # Violations	-0.183 (0.224)	-3.226*** (1.478)	-0.155 (0.187)	-2.719** (1.098)	-0.213 (0.175)	-2.506*** (0.918)
Drugs	0.010* (0.005)	0.038 (0.039)	0.010* (0.005)	0.064* (0.037)	0.005 (0.004)	0.039 (0.026)
Alcohol	-0.003 (0.003)	-0.024 (0.020)	0.000 (0.003)	-0.001 (0.016)	0.001 (0.003)	-0.005 (0.014)
Weapon	-0.004 (0.003)	-0.059*** (0.024)	-0.001 (0.003)	-0.048*** (0.019)	-0.001 (0.003)	-0.054*** (0.018)
Stolen Property	-0.004 (0.003)	-0.021** (0.010)	-0.004 (0.003)	-0.022* (0.011)	-0.005 (0.003)	-0.027* (0.013)
Other Unauthorized Substance or Item	0.013 (0.010)	-0.039 (0.090)	0.011 (0.008)	0.002 (0.060)	0.004 (0.007)	-0.011 (0.041)
Verbal Assault on Staff	-0.017** (0.007)	-0.083* (0.041)	-0.014** (0.006)	-0.062 (0.037)	-0.016*** (0.005)	-0.055 (0.037)
Physical Assault on Staff	-0.003 (0.002)	-0.027 (0.024)	-0.000 (0.003)	-0.015 (0.022)	-0.001 (0.003)	-0.018 (0.016)
Verbal Assault on Another Inmate	-0.013** (0.005)	-0.050* (0.027)	-0.011* (0.0057)	-0.046* (0.024)	-0.013** (0.006)	-0.057** (0.023)
Physical Assault on Another Inmate	-0.005 (0.006)	-0.140** (0.061)	-0.004 (0.006)	-0.112** (0.042)	-0.003 (0.006)	-0.086** (0.037)
Escape or Intended Escape	-0.002 (0.001)	-0.002 (0.008)	0.000 (0.001)	0.002 (0.008)	-0.000 (0.001)	-0.008 (0.010)
Being Out of Place	0.004 (0.009)	-0.139* (0.069)	0.000 (0.008)	-0.114** (0.055)	-0.002 (0.007)	-0.088** (0.038)
Disobeying Orders	-0.004 (0.013)	-0.145* (0.075)	-0.004 (0.010)	-0.109* (0.062)	-0.010 (0.008)	-0.057 (0.053)
Any Major Violation	-0.002 (0.003)	-0.060*** (0.019)	-0.000 (0.003)	-0.037* (0.021)	0.000 (0.003)	-0.005 (0.026)
Any Minor Violation	-0.006 (0.005)	-0.092*** (0.031)	-0.003 (0.006)	-0.067** (0.029)	-0.003 (0.006)	-0.047 (0.028)
Any Other Violation	-0.010 (0.006)	-0.078*** (0.028)	-0.011 (0.006)	-0.063** (0.028)	-0.010 (0.006)	-0.036 (0.028)
Observations	13,052	12,554	12,146	11,697	12,146	11,697

Publicly-Available Administrative Data

- Transparency Initiatives
 - California Open Justice Initiative
<http://openjustice.doj.ca.gov/>
 - Berkeley PD stop data available on Berkeley data portal <https://data.cityofberkeley.info/Public-Safety/Stop-Data/6e9j-pj9p>
 - NYPD Stop and Frisk Data Archive
http://www.nyc.gov/html/nypd/html/analysis_and_planning/stop_question_and_frisk_report.shtm
!

Restricted Use Administrative Data (using California as an example)

- CDCR
- ACHS records maintained by the AG's office
- Criminal procedure between arrest charge and disposition
 - Need to go local (DA's office, AOC).
- Linking to employment, vital statistics
 - See the incredible work being done by Michael Mueller-Smith <http://sites.lsa.umich.edu/mgms/>