# Are Younger Generations Committing Less Crime?

## Technical Appendix

### CONTENTS

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# Appendix A. Data Description, Figures, and Tables

## Data

In this report, we use individual level data, provided by the California Department of Justice, on arrests from the Automated Criminal History System (ACHS) from January 1, 1980 to December 31, 2020. This detailed data (sometimes referred to as "rap sheet" data) includes the level of offense (infraction, misdemeanor, and felony), Criminal Justice Information Services offense code, penal code violation, law enforcement agency, and date of the event. It also includes suspect information such as gender, age, and race/ethnicity. Unique individual identifiers allow us to determine whether and when an individual has previously been arrested. To avoid double-counting individual arrest incidents, we include only the most severe offense per arrest event/date.

## Figures and Tables

**FIGURE A1**

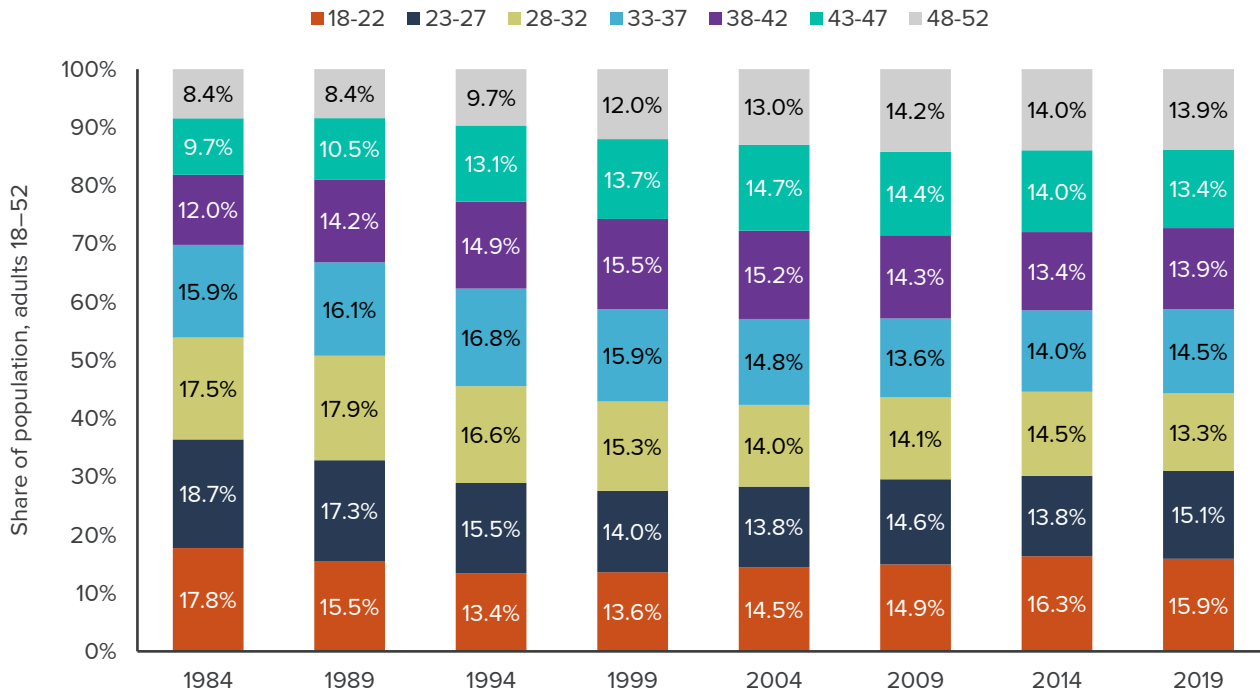Violent crime rates and violent felony arrests, 1980-2019
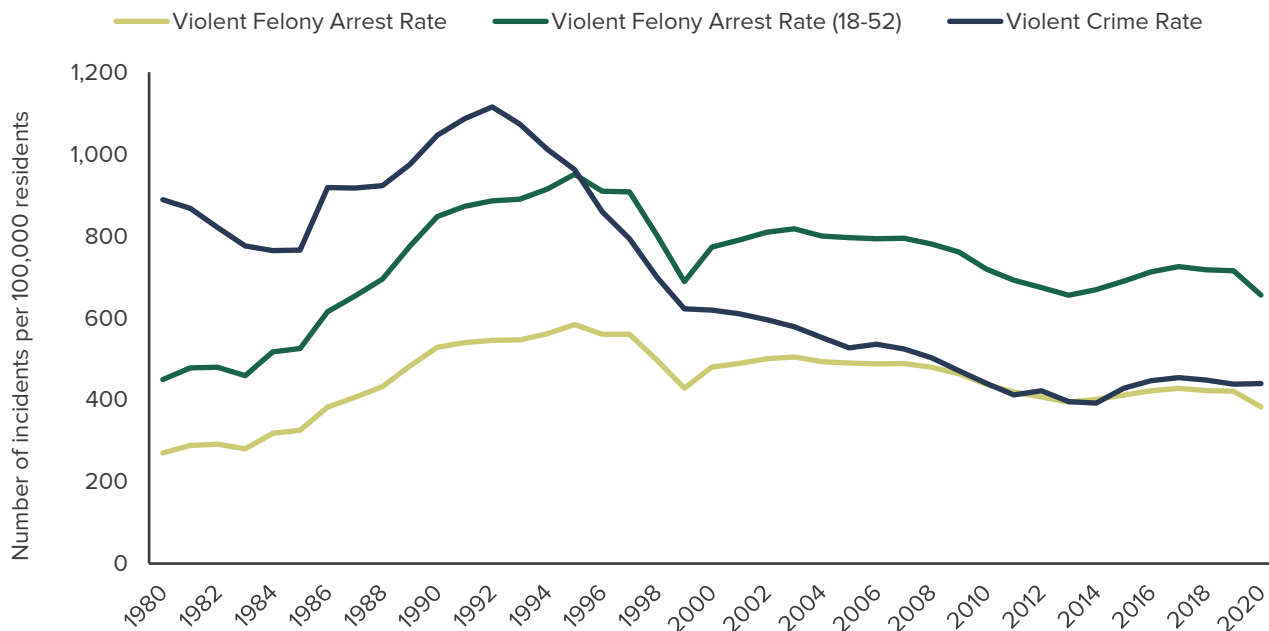


SOURCE: Authors' calculations using data from California Department of Justice, Automated Criminal History System, 1980-2019 and the California Department of Justice's Criminal Justice Statistics Center, California Crimes and Clearances Files, 1980–2019

NOTE: The figure shows felony violent arrest rate (annual number of felony violent arrests per 100,000 residents) for all ages, as well as those between 18 and 52, based on the ACHS data and the violent crime rate (number of violent offenses reported to law enforcement agencies) based on the UCR definitions (where violent crime is limited to homicide, rape, aggravated assaults and robbery) using CADOJ's Crimes and Clearance files. Note that the crimes captured by these two distinct sources are not identical and differ in how the incidents are reported to California DOJ.

## FIGURE A2

Age distribution, California residents between the ages of 18 and 52

**■ 18-22  ■ 23-27  ■ 28-32  ■ 33-37  ■ 38-42  ■ 43-47  ■ 48-52**



SOURCE: Authors' calculations using data from the California Department of Finance Population Estimates.

## FIGURE A3

The number of violent felonies per individual arrested has steadily increased over the last decade

**── 1980  ── 1990  ── 2000  ── 2010  ── 2015  ── 2019**
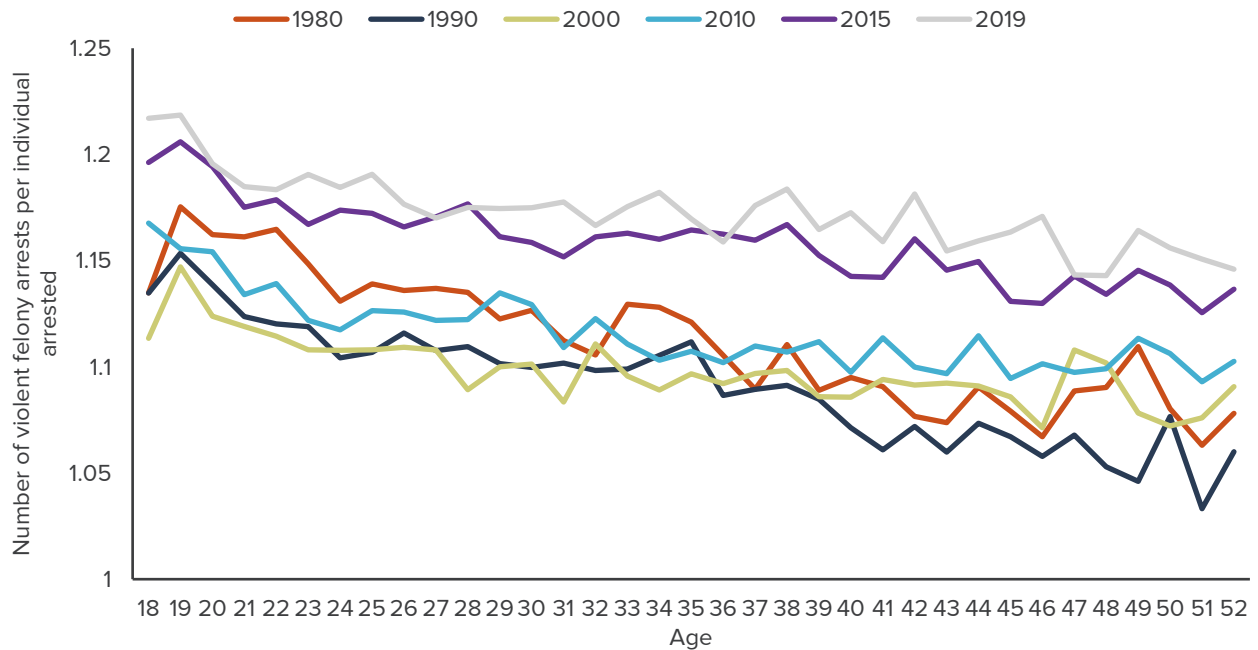


SOURCE: Authors' calculations using data extracted from California Department of Justice, Automated Criminal History System, 1980-2020.

NOTE: Figure shows the number of violent felonies per individual arrested in a year by age.

After increasing in the 1990s, drug use among 12th graders is now notably lower than early 2000s



SOURCE: Authors' calculations using data from Monitoring the Future Study, University of Michigan.

FIGURE A5
The teenage birth rate is now a third of what it was in 1980
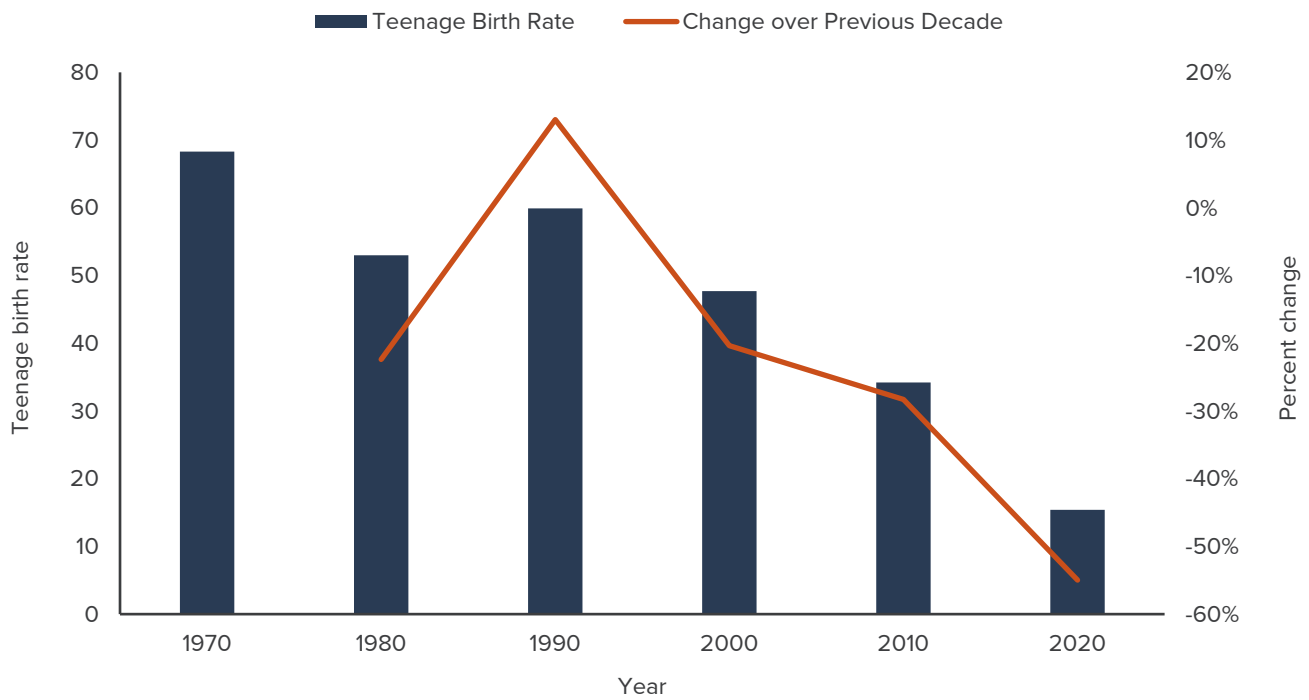


SOURCE: Authors' calculations using data from National Vital Statistics Report, Births: Final Data for 2020.
NOTE: Teenage birth rate, mother aged 15-19. Calculated as number of births per 1,000 teenage women.

## FIGURE A6
High schoolers' time spent on computers or playing video games is increasing.
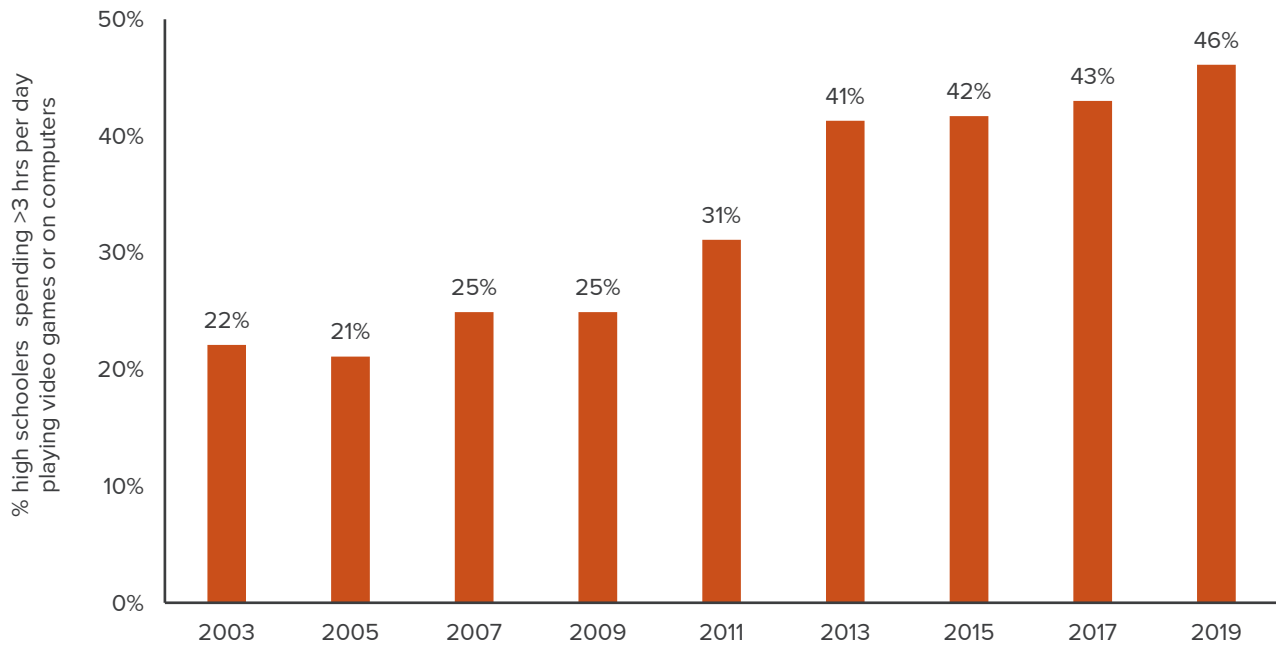


SOURCE: Centers for Disease Control.

## FIGURE A7
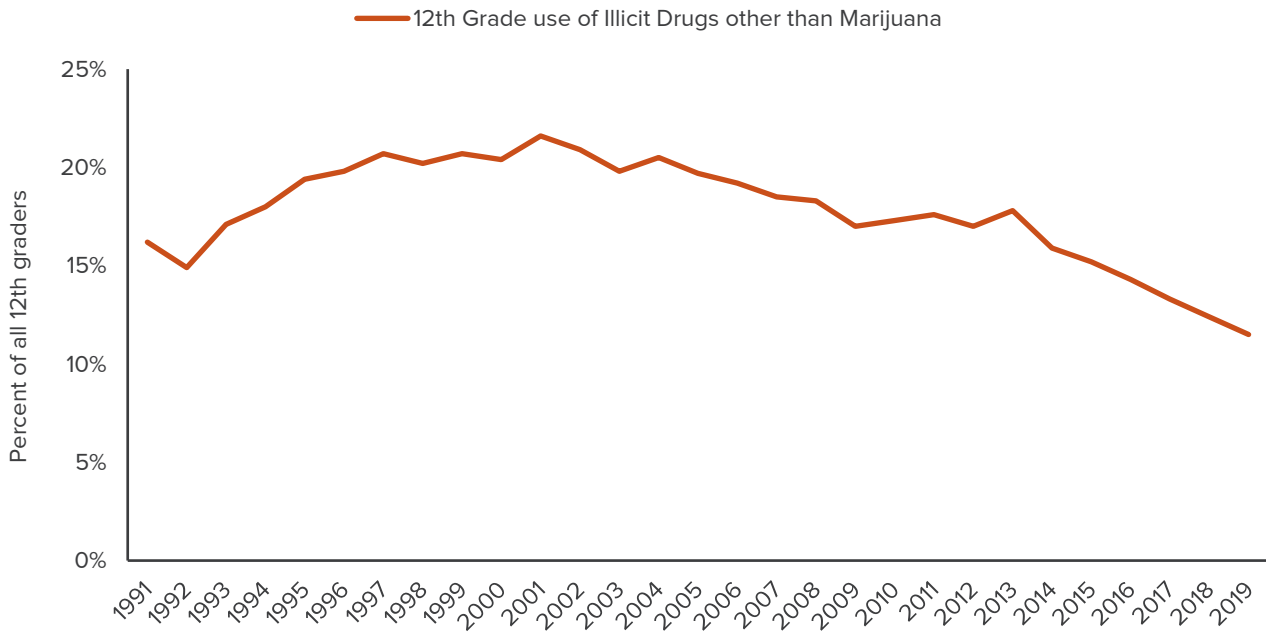A lower share of the most recent generation has been arrested for a violent felony by age 25
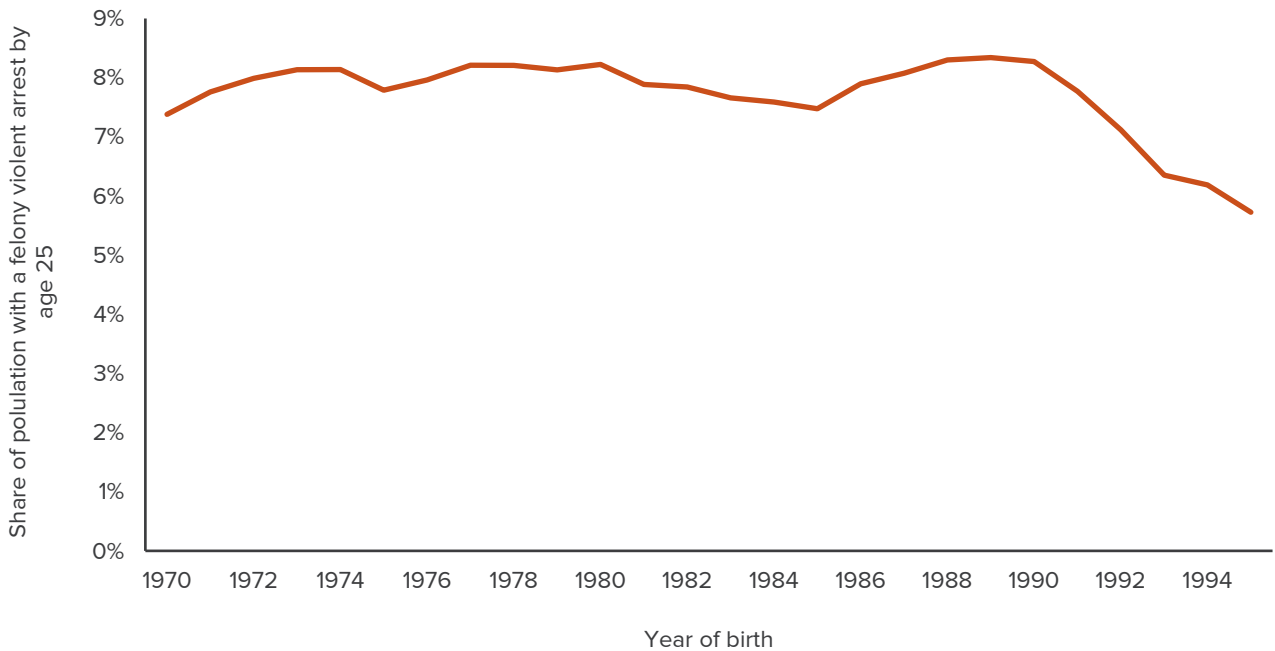


SOURCE: Authors' calculations using data from California Department of Justice, Automated Criminal History System, 1980-2020.

NOTE: For all individuals with an arrest for a violent felony, we determine the age at the first arrest for such an offense. We then used this to calculate the number of individuals of any given birth year who appeared in the ACHS with an arrest for such an offense by age 25. We also calculated the number of 25-year-old California residents for each birth year in the year they were 25. The ratio of those two numbers represents the line in the figure.

**TABLE A1**
20 most common violent felony arrest offenses, 2019

| Violent Felony Offense | Frequency | Percent |
|---|---|---|
| Inflict corporal injury on spouse or cohabitant (273.5(A)) | 49,339 | 29.49 |
| Assault with a deadly weapon that is not a firearm (245(A)(1)) | 16,681 | 9.97 |
| Robbery (211) | 15,780 | 9.43 |
| Felon or addict in possession of a firearm (29800(A)(1)) | 8,171 | 4.88 |
| Assault with a deadly weapon with force (245(A)(4)) | 7,100 | 4.24 |
| Child cruelty, possibly resulting in injury or death (273(A)(A)) | 6,947 | 4.15 |
| Carry a concealed dirk or dagger (21310) | 6,063 | 3.62 |
| Second degree robbery (211) | 3,815 | 2.28 |
| Murder (187(A) | 3,519 | 2.1 |
| Prohibited ownership of ammunition (30305(A)(1)) | 2,859 | 1.71 |
| Battery with serious bodily injury (243(D)) | 2,788 | 1.67 |
| Lewd or lascivious act with a child under 14 (288(A) | 2,202 | 1.32 |
| Kidnapping (207(A)) | 1,968 | 1.18 |
| Assault another person with a firearm (245(A)(2)) | 1,923 | 1.15 |
| Carrying a concealed weapon in a vehicle (25400(A)(1)) | 1,669 | 1 |
| Manufacture, sale, or possession of metal knuckles (21810) | 1,497 | 0.89 |
| Manufacture, sale, or possession of a leaded billy cane (22210) | 1,362 | 0.81 |
| Carry a loaded firearm in a public place (25850(A)) | 1,165 | 0.7 |
| First degree robbery (211) | 1,126 | 0.67 |
| Rape by force or fear (261(A)(1)) | 901 | 0.54 |
| | | |
| Sum | 136,875 | 81.8 |

SOURCE: Authors' calculations using data from California Department of Justice, Automated Criminal History System, 2019.

NOTE: Table shows the frequency and percent of the 20 most common offenses captured by author's definition of violent felonies in 2019. California penal codes are referenced in parentheses.

**TABLE A2**
Enrollment and educational attainment

| | 1990 | 2000 | 2010 | 2021 |
|---|---|---|---|---|
| | **Enrollment Status, 18-22 year olds** | | | |
| Not in school, not a high school graduate | 21.0% | 19.4% | 9.9% | 4.7% |
| Not in school, high school graduate or GED | 19.6% | 18.1% | 18.2% | 21.8% |
| | | | | |
| In school/college, not a HS graduate | 11.6% | 11.8% | 8.3% | 6.5% |
| In school/college, HS graduate | 37.7% | 41.2% | 53.2% | 55.9% |
| In school/college | 49.3% | 53.0% | 61.5% | 62.4% |
| | | | | |
| Not in school/college, some college | 7.8% | 7.4% | 8.3% | 8.2% |
| Not in school/college, associate degree or more | 2.3% | 2.1% | 2.0% | 2.9% |
| | | | | |
| | **Educational Attainment, 25 year olds** | | | |
| Average Years of Schooling, 25 year olds | 11.93 | 13.03 | 13.27 | 13.83 |

SOURCE: Authors' calculations using data from National Vital Statistics Reports.

# Appendix B. Empirical Specification and Results

## Empirical Specification

We estimate separate fixed effects ordinary least squares models with robust standard errors of the following specifications of our criminal offending measures:

$$y_{ijt} = \alpha + BirthYear_{it}\beta + Age_{jt}\gamma + Period_t\delta + \epsilon_{ijt}$$

Where $y_{ijt}$ represents our three measures of criminal offending (number of felony violent arrests per 100,000 residents, number of individuals arrested for a violent felony per 100,000 residents, and the number of felony violent arrests per individual arrested for a felony violent offense), for each group defined by birth year $i$, at age $j$ in year $t$. $BirthYear_{it}$ are fixed effects for the year of birth (1960 to 2002), $Age_{jt}$ is year specific age fixed effects (ages 18 to 52) and $Period_t$ represents five-year interval fixed effects (1980-84, 1985-89, 1990-94, 1995-99, 2000-04, 2005-09, 2010-14, 2015-19).

The estimated vector of coefficients $\widehat{\beta}$ are the parameters of particular interest, and represent differences in criminal offending between each year of birth (1961 to 2002) and those born in 1960. The estimated parameters can then be used to test for differences across any year of births, and allows us to test for changes in criminal offending across generations.

As arrest outcomes are determined by a combination of age, period and birth cohort effects, and each of the three are a linear combination of the other two effects (i.e. age=birth year – year), we need to make an identifying assumption about the specification. Here we assume that the five year period intervals adequately captures period effects.

In all tables below, in the first column we only include birth year fixed effects, in the second we add age fixed effects and lastly, in column three we add period effects.

## Empirical Results

**TABLE B1**
OLS fixed effects models of violent felony arrest rates
(Number of violent felony arrests in a year per 100,000 residents).

|  | (1) | (2) | (3) |
|---|---|---|---|
| birthyear = 1961 | 25.64 | 7.83 | 7.60 |
|  | (70.69) | (41.27) | (21.02) |
| birthyear = 1962 | 77.53 | 42.78 | 42.23* |
|  | (74.58) | (38.89) | (21.69) |
| birthyear = 1963 | 63.29 | 28.54 | 16.16 |
|  | (74.27) | (39.69) | (21.95) |
| birthyear = 1964 | 50.10 | 15.35 | -8.87 |
|  | (74.07) | (39.85) | (23.04) |
| birthyear = 1965 | 36.95 | 2.20 | -33.86 |
|  | (75.51) | (38.39) | (23.94) |

|  | (1) | (2) | (3) |
|---|---|---|---|
| birthyear = 1966 | 52.24 | 17.49 | -30.41 |
|  | (77.32) | (36.48) | (23.21) |
| birthyear = 1967 | 63.35 | 28.60 | -31.13 |
|  | (80.20) | (35.88) | (25.35) |
| birthyear = 1968 | 49.28 | 14.53 | -52.34** |
|  | (82.32) | (35.83) | (26.52) |
| birthyear = 1969 | 66.95 | 17.08 | -56.91** |
|  | (84.25) | (35.61) | (27.72) |
| birthyear = 1970 | 70.69 | 5.43 | -75.70** |
|  | (86.20) | (34.95) | (29.83) |
| birthyear = 1971 | 89.32 | 8.16 | -80.18** |
|  | (89.82) | (36.41) | (32.15) |
| birthyear = 1972 | 109.53 | 11.95 | -83.89** |
|  | (95.62) | (41.63) | (34.10) |
| birthyear = 1973 | 129.02 | 14.74 | -75.70** |
|  | (97.63) | (44.83) | (37.64) |
| birthyear = 1974 | 139.12 | 7.81 | -76.74* |
|  | (97.52) | (45.25) | (39.41) |
| birthyear = 1975 | 133.15 | -16.04 | -94.16** |
|  | (94.07) | (42.84) | (39.90) |
| birthyear = 1976 | 176.09* | 8.79 | -62.36 |
|  | (92.34) | (42.74) | (42.11) |
| birthyear = 1977 | 225.64** | 40.03 | -23.68 |
|  | (90.46) | (41.49) | (42.79) |
| birthyear = 1978 | 250.15*** | 45.79 | -13.39 |
|  | (87.08) | (38.83) | (43.72) |
| birthyear = 1979 | 264.05*** | 40.61 | -13.74 |
|  | (82.09) | (36.25) | (45.44) |
| birthyear = 1980 | 273.58*** | 31.02 | -18.16 |
|  | (80.24) | (36.68) | (48.56) |
| birthyear = 1981 | 297.67*** | 35.56 | -8.08 |
|  | (77.43) | (37.00) | (51.41) |
| birthyear = 1982 | 307.45*** | 25.60 | -12.25 |
|  | (77.47) | (37.98) | (50.07) |
| birthyear = 1983 | 289.33*** | -12.52 | -48.39 |
|  | (76.62) | (38.57) | (52.37) |
| birthyear = 1984 | 298.65*** | -23.14 | -57.10 |
|  | (70.75) | (36.60) | (53.78) |
| birthyear = 1985 | 329.44*** | -12.00 | -44.10 |
|  | (67.24) | (36.48) | (56.94) |
| birthyear = 1986 | 368.26*** | 7.22 | -23.08 |
|  | (62.41) | (36.69) | (59.52) |
| birthyear = 1987 | 410.94*** | 30.35 | 1.62 |
|  | (61.74) | (37.15) | (60.65) |
| birthyear = 1988 | 463.04*** | 63.02 | 32.18 |
|  | (62.28) | (41.12) | (63.50) |
| birthyear = 1989 | 484.14*** | 64.45 | 30.74 |

|  | (1) | (2) | (3) |
|---|---|---|---|
|  | (61.59) | (44.89) | (66.65) |
| birthyear = 1990 | 509.94*** | 70.94 | 33.46 |
|  | (60.47) | (47.78) | (69.64) |
| birthyear = 1991 | 456.20*** | -1.33 | -43.66 |
|  | (58.49) | (50.34) | (74.02) |
| birthyear = 1992 | 372.69*** | -103.21** | -150.57** |
|  | (55.05) | (49.96) | (76.64) |
| birthyear = 1993 | 278.20*** | -215.42*** | -274.89*** |
|  | (53.43) | (52.25) | (79.77) |
| birthyear = 1994 | 262.65*** | -247.22*** | -320.69*** |
|  | (53.36) | (55.52) | (82.86) |
| birthyear = 1995 | 205.87*** | -318.20*** | -408.27*** |
|  | (54.03) | (55.08) | (84.21) |
| birthyear = 1996 | 155.42*** | -382.58*** | -492.99*** |
|  | (53.49) | (49.76) | (83.27) |
| birthyear = 1997 | 112.58** | -440.66*** | -576.20*** |
|  | (51.49) | (45.90) | (86.99) |
| birthyear = 1998 | 74.17 | -493.91*** | -634.20*** |
|  | (50.43) | (39.76) | (84.74) |
| birthyear = 1999 | 6.40 | -574.80*** | -719.39*** |
|  | (50.21) | (37.71) | (83.74) |
| birthyear = 2000 | -56.81 | -645.02*** | -793.14*** |
|  | (50.92) | (40.27) | (85.32) |
| birthyear = 2001 | -103.33** | -711.45*** | -861.41*** |
|  | (52.41) | (45.86) | (86.89) |
| birthyear = 2002 | -173.39*** | -784.00*** | -935.80*** |
|  | (49.23) | (52.81) | (88.68) |
| Age = 19 |  | -4.95 | -8.65 |
|  |  | (54.34) | (31.50) |
| Age = 20 |  | -62.22 | -69.58** |
|  |  | (52.11) | (30.13) |
| Age = 21 |  | -50.44 | -68.25** |
|  |  | (51.88) | (30.57) |
| Age = 22 |  | -95.01* | -123.71*** |
|  |  | (51.00) | (31.41) |
| Age = 23 |  | -131.56*** | -171.61*** |
|  |  | (50.06) | (32.06) |
| Age = 24 |  | -163.98*** | -215.87*** |
|  |  | (48.39) | (32.95) |
| Age = 25 |  | -184.15*** | -247.84*** |
|  |  | (47.63) | (34.38) |
| Age = 26 |  | -214.30*** | -285.18*** |
|  |  | (47.41) | (36.09) |
| Age = 27 |  | -263.21*** | -341.22*** |
|  |  | (47.67) | (37.30) |
| Age = 28 |  | -311.96*** | -397.11*** |
|  |  | (48.38) | (38.59) |

| | (1) | (2) | (3) |
|---|---|---|---|
| Age = 29 | | -354.99*** | -447.33*** |
| | | (48.44) | (39.27) |
| Age = 30 | | -394.11*** | -493.96*** |
| | | (49.72) | (39.66) |
| Age = 31 | | -441.88*** | -536.34*** |
| | | (49.38) | (40.54) |
| Age = 32 | | -486.05*** | -574.61*** |
| | | (50.04) | (41.61) |
| Age = 33 | | -521.34*** | -603.49*** |
| | | (50.53) | (42.81) |
| Age = 34 | | -562.48*** | -637.64*** |
| | | (50.17) | (44.41) |
| Age = 35 | | -602.36*** | -670.08*** |
| | | (50.33) | (46.07) |
| Age = 36 | | -642.48*** | -705.67*** |
| | | (48.96) | (47.45) |
| Age = 37 | | -687.49*** | -745.85*** |
| | | (48.36) | (49.26) |
| Age = 38 | | -728.66*** | -781.86*** |
| | | (47.67) | (50.62) |
| Age = 39 | | -763.34*** | -811.00*** |
| | | (47.42) | (52.83) |
| Age = 40 | | -798.11*** | -839.97*** |
| | | (47.37) | (53.52) |
| Age = 41 | | -826.89*** | -866.78*** |
| | | (47.08) | (55.43) |
| Age = 42 | | -863.99*** | -901.97*** |
| | | (46.85) | (57.56) |
| Age = 43 | | -893.77*** | -929.89*** |
| | | (46.58) | (59.38) |
| Age = 44 | | -919.46*** | -953.77*** |
| | | (46.18) | (61.35) |
| Age = 45 | | -950.48*** | -983.23*** |
| | | (46.01) | (63.74) |
| Age = 46 | | -979.84*** | -1,014.69*** |
| | | (45.69) | (65.86) |
| Age = 47 | | -990.01*** | -1,027.74*** |
| | | (45.52) | (67.40) |
| Age = 48 | | -1,014.07*** | -1,055.57*** |
| | | (45.37) | (69.30) |
| Age = 49 | | -1,038.43*** | -1,084.76*** |
| | | (45.18) | (71.59) |
| Age = 50 | | -1,054.30*** | -1,105.68*** |
| | | (45.39) | (73.81) |
| Age = 51 | | -1,068.77*** | -1,132.25*** |
| | | (45.85) | (75.28) |
| Age = 52 | | -1,089.74*** | -1,167.22*** |

|  | (1) | (2) | (3) |
|---|---|---|---|
|  |  | (45.94) | (77.56) |
| Yr1980_84 |  |  | -414.27*** |
|  |  |  | (76.86) |
| Yr1985_89 |  |  | -249.79*** |
|  |  |  | (67.99) |
| Yr1990_94 |  |  | 147.37*** |
|  |  |  | (54.67) |
| Yr1995_99 |  |  | 61.19 |
|  |  |  | (48.89) |
| Yr2000_04 |  |  | -21.26 |
|  |  |  | (33.29) |
| Yr2005_09 |  |  | -72.60*** |
|  |  |  | (22.73) |
| Yr2010_14 |  |  | -140.32*** |
|  |  |  | (13.16) |
| Constant | 768.09*** | 1,378.69*** | 1,530.50*** |
|  | (49.23) | (52.81) | (88.68) |
|  |  |  |  |
| Observations | 907 | 907 | 907 |
| R-squared | 0.15 | 0.86 | 0.95 |

NOTES: Estimates are based on age-year specific felony violent arrest rates, 1980-2020, limited to ages 18-52 and years of birth between 1960 and 2002 .Reference birth year is 1960, reference age is 18 and reference period is 2015-2019. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

**TABLE B2**
OLS fixed effects models of number of individuals arrested for a violent felony per 100,000 residents

|  | (1) | (2) | (3) |
|---|---|---|---|
| birthyear = 1961 | 22.91 | 7.34 | 7.69 |
|  | (62.56) | (38.40) | (17.55) |
| birthyear = 1962 | 69.45 | 38.61 | 39.21** |
|  | (66.27) | (36.27) | (18.54) |
| birthyear = 1963 | 57.13 | 26.28 | 16.91 |
|  | (66.11) | (36.77) | (18.44) |
| birthyear = 1964 | 46.81 | 15.96 | -3.38 |
|  | (66.31) | (36.75) | (19.43) |
| birthyear = 1965 | 35.38 | 4.53 | -24.78 |
|  | (67.67) | (35.25) | (20.00) |
| birthyear = 1966 | 48.42 | 17.57 | -21.71 |
|  | (69.46) | (33.65) | (19.39) |
| birthyear = 1967 | 55.91 | 25.06 | -24.19 |
|  | (71.92) | (33.01) | (21.27) |
| birthyear = 1968 | 44.58 | 13.73 | -40.97* |
|  | (73.88) | (32.75) | (22.26) |
| birthyear = 1969 | 57.64 | 13.02 | -47.21** |
|  | (75.50) | (32.59) | (23.16) |

| | (1) | (2) | (3) |
|---|---|---|---|
| birthyear = 1970 | 60.44 | 1.79 | -63.97** |
| | (76.80) | (31.86) | (25.08) |
| birthyear = 1971 | 76.12 | 3.01 | -68.33** |
| | (79.89) | (33.00) | (27.02) |
| birthyear = 1972 | 92.86 | 4.83 | -72.37** |
| | (84.60) | (37.02) | (28.49) |
| birthyear = 1973 | 109.45 | 6.28 | -65.53** |
| | (86.83) | (40.11) | (31.58) |
| birthyear = 1974 | 119.42 | 0.83 | -65.14** |
| | (86.55) | (40.40) | (32.93) |
| birthyear = 1975 | 112.41 | -22.32 | -81.99** |
| | (83.48) | (38.44) | (33.43) |
| birthyear = 1976 | 147.70* | -3.41 | -56.29 |
| | (82.41) | (38.69) | (35.50) |
| birthyear = 1977 | 188.12** | 20.38 | -25.26 |
| | (80.24) | (36.96) | (35.88) |
| birthyear = 1978 | 210.90*** | 26.25 | -14.57 |
| | (77.93) | (35.28) | (36.45) |
| birthyear = 1979 | 221.66*** | 19.75 | -15.94 |
| | (73.66) | (32.89) | (37.81) |
| birthyear = 1980 | 228.15*** | 8.95 | -21.28 |
| | (72.30) | (33.43) | (40.36) |
| birthyear = 1981 | 246.09*** | 9.24 | -15.13 |
| | (69.74) | (33.42) | (42.75) |
| birthyear = 1982 | 253.17*** | -1.52 | -19.77 |
| | (69.43) | (34.34) | (41.72) |
| birthyear = 1983 | 238.46*** | -34.28 | -50.07 |
| | (68.84) | (34.86) | (43.57) |
| birthyear = 1984 | 244.35*** | -46.39 | -59.76 |
| | (63.62) | (33.43) | (45.01) |
| birthyear = 1985 | 267.15*** | -41.31 | -52.26 |
| | (60.81) | (32.97) | (47.63) |
| birthyear = 1986 | 302.16*** | -23.98 | -32.51 |
| | (56.52) | (33.08) | (49.84) |
| birthyear = 1987 | 333.20*** | -10.61 | -16.88 |
| | (55.87) | (33.35) | (50.66) |
| birthyear = 1988 | 375.02*** | 13.70 | 6.67 |
| | (55.61) | (36.40) | (53.08) |
| birthyear = 1989 | 390.45*** | 11.46 | 3.11 |
| | (54.32) | (39.03) | (55.80) |
| birthyear = 1990 | 406.91*** | 10.63 | 0.31 |
| | (52.97) | (40.76) | (58.16) |
| birthyear = 1991 | 356.65*** | -56.12 | -69.18 |
| | (51.28) | (43.32) | (62.08) |
| birthyear = 1992 | 284.91*** | -144.04*** | -159.82** |
| | (47.88) | (42.96) | (64.41) |
| birthyear = 1993 | 199.64*** | -244.99*** | -270.16*** |

| | (1) | (2) | (3) |
|---|---|---|---|
| | (46.45) | (44.54) | (67.05) |
| birthyear = 1994 | 180.87*** | -278.00*** | -314.04*** |
| | (46.57) | (47.42) | (69.70) |
| birthyear = 1995 | 129.82*** | -341.40*** | -390.33*** |
| | (47.25) | (47.76) | (71.15) |
| birthyear = 1996 | 85.55* | -397.44*** | -462.16*** |
| | (46.16) | (43.22) | (70.03) |
| birthyear = 1997 | 47.85 | -447.37*** | -531.47*** |
| | (45.36) | (41.84) | (73.47) |
| birthyear = 1998 | 10.59 | -496.21*** | -584.24*** |
| | (44.45) | (37.77) | (71.88) |
| birthyear = 1999 | -43.92 | -561.01*** | -652.55*** |
| | (43.81) | (35.28) | (70.46) |
| birthyear = 2000 | -99.25** | -621.27*** | -715.59*** |
| | (44.23) | (37.89) | (72.00) |
| birthyear = 2001 | -139.92*** | -679.76*** | -775.24*** |
| | (45.20) | (39.08) | (71.64) |
| birthyear = 2002 | -189.32*** | -739.76*** | -836.43*** |
| | (43.57) | (47.43) | (74.22) |
| Age = 19 | | -21.22 | -23.58 |
| | | (47.39) | (26.33) |
| Age = 20 | | -64.04 | -68.74*** |
| | | (45.68) | (25.36) |
| Age = 21 | | -48.12 | -61.60** |
| | | (45.60) | (25.84) |
| Age = 22 | | -84.82* | -107.46*** |
| | | (44.75) | (26.64) |
| Age = 23 | | -113.15** | -145.34*** |
| | | (43.92) | (27.11) |
| Age = 24 | | -140.80*** | -182.96*** |
| | | (42.33) | (27.81) |
| Age = 25 | | -161.62*** | -213.76*** |
| | | (41.43) | (28.94) |
| Age = 26 | | -190.34*** | -248.06*** |
| | | (41.28) | (30.57) |
| Age = 27 | | -234.01*** | -297.25*** |
| | | (41.54) | (31.63) |
| Age = 28 | | -278.24*** | -347.01*** |
| | | (42.05) | (32.66) |
| Age = 29 | | -315.69*** | -390.04*** |
| | | (42.28) | (33.20) |
| Age = 30 | | -352.05*** | -432.26*** |
| | | (43.29) | (33.36) |
| Age = 31 | | -396.25*** | -471.06*** |
| | | (43.06) | (34.16) |
| Age = 32 | | -436.48*** | -505.46*** |
| | | (43.58) | (34.99) |

| | (1) | (2) | (3) |
|---|---|---|---|
| Age = 33 | | -469.27*** | -531.95*** |
| | | (44.01) | (35.95) |
| Age = 34 | | -506.96*** | -562.84*** |
| | | (43.73) | (37.34) |
| Age = 35 | | -542.66*** | -591.32*** |
| | | (44.05) | (38.80) |
| Age = 36 | | -578.53*** | -622.36*** |
| | | (42.89) | (39.77) |
| Age = 37 | | -619.87*** | -658.57*** |
| | | (42.29) | (41.32) |
| Age = 38 | | -656.63*** | -689.86*** |
| | | (41.74) | (42.41) |
| Age = 39 | | -688.22*** | -715.60*** |
| | | (41.51) | (44.30) |
| Age = 40 | | -719.38*** | -740.64*** |
| | | (41.47) | (44.88) |
| Age = 41 | | -746.25*** | -765.05*** |
| | | (41.39) | (46.47) |
| Age = 42 | | -780.29*** | -796.67*** |
| | | (41.17) | (48.20) |
| Age = 43 | | -805.57*** | -819.53*** |
| | | (40.88) | (49.77) |
| Age = 44 | | -831.49*** | -843.03*** |
| | | (40.61) | (51.42) |
| Age = 45 | | -857.91*** | -867.19*** |
| | | (40.43) | (53.32) |
| Age = 46 | | -883.54*** | -893.57*** |
| | | (40.15) | (55.13) |
| Age = 47 | | -894.61*** | -905.97*** |
| | | (40.02) | (56.39) |
| Age = 48 | | -916.83*** | -930.16*** |
| | | (39.85) | (57.93) |
| Age = 49 | | -939.89*** | -955.96*** |
| | | (39.65) | (59.82) |
| Age = 50 | | -954.14*** | -972.92*** |
| | | (39.77) | (61.74) |
| Age = 51 | | -968.97*** | -997.15*** |
| | | (40.15) | (63.03) |
| Age = 52 | | -987.92*** | -1,026.97*** |
| | | (40.23) | (64.87) |
| Yr1980_84 | | | -349.02*** |
| | | | (64.48) |
| Yr1985_89 | | | -190.78*** |
| | | | (57.14) |
| Yr1990_94 | | | 155.71*** |
| | | | (45.89) |
| Yr1995_99 | | | 83.60** |

|  | (1) | (2) | (3) |
|---|---|---|---|
|  |  |  | (41.12) |
| Yr2000_04 |  |  | 3.98 |
|  |  |  | (27.91) |
| Yr2005_09 |  |  | -39.10** |
|  |  |  | (18.99) |
| Yr2010_14 |  |  | -106.09*** |
|  |  |  | (10.91) |
| Constant | 689.98*** | 1,240.42*** | 1,337.09*** |
|  | (43.57) | (47.43) | (74.22) |
|  |  |  |  |
| Observations | 907 | 907 | 907 |
| R-squared | 0.12 | 0.86 | 0.95 |

NOTES: Estimates are based on age-year specific number of individuals arrested for a violent felony per 100,000 residents, 1980–2020, limited to ages 18–52 and years of birth between 1960 and 2002. Reference birth year is 1960, reference age is 18, and reference period is 2015–2019. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

**TABLE B3**

OLS fixed effects models of the number of felony violent arrests in a year per individual arrested for a violent felony

|  | (1) | (2) | (3) |
|---|---|---|---|
| birthyear = 1961 | 0.0001 | 0.0001 | -0.0001 |
|  | (0.004) | (0.005) | (0.003) |
| birthyear = 1962 | 0.001 | 0.002 | 0.0001 |
|  | (0.004) | (0.005) | (0.003) |
| birthyear = 1963 | 0.001 | 0.001 | -0.0001 |
|  | (0.004) | (0.005) | (0.003) |
| birthyear = 1964 | 0.0001 | 0.001 | -0.002 |
|  | (0.004) | (0.004) | (0.003) |
| birthyear = 1965 | 0.001 | 0.001 | -0.002 |
|  | (0.004) | (0.004) | (0.003) |
| birthyear = 1966 | 0.003 | 0.003 | -0.0001 |
|  | (0.004) | (0.005) | (0.003) |
| birthyear = 1967 | 0.007* | 0.007 | 0.003 |
|  | (0.004) | (0.004) | (0.003) |
| birthyear = 1968 | 0.005 | 0.005 | -0.000 |
|  | (0.004) | (0.004) | (0.004) |
| birthyear = 1969 | 0.010** | 0.011** | 0.004 |
|  | (0.004) | (0.004) | (0.004) |
| birthyear = 1970 | 0.008* | 0.010** | 0.003 |
|  | (0.004) | (0.005) | (0.004) |
| birthyear = 1971 | 0.010** | 0.012** | 0.004 |
|  | (0.004) | (0.005) | (0.004) |
| birthyear = 1972 | 0.010** | 0.013*** | 0.005 |
|  | (0.005) | (0.005) | (0.005) |
| birthyear = 1973 | 0.014*** | 0.017*** | 0.008 |
|  | (0.005) | (0.005) | (0.005) |

| | (1) | (2) | (3) |
|---|---|---|---|
| birthyear = 1974 | 0.011** | 0.015*** | 0.005 |
| | (0.005) | (0.005) | (0.005) |
| birthyear = 1975 | 0.013*** | 0.018*** | 0.007 |
| | (0.004) | (0.005) | (0.005) |
| birthyear = 1976 | 0.019*** | 0.024*** | 0.013** |
| | (0.005) | (0.005) | (0.006) |
| birthyear = 1977 | 0.023*** | 0.028*** | 0.017*** |
| | (0.005) | (0.006) | (0.006) |
| birthyear = 1978 | 0.022*** | 0.028*** | 0.015*** |
| | (0.005) | (0.005) | (0.006) |
| birthyear = 1979 | 0.024*** | 0.030*** | 0.017*** |
| | (0.005) | (0.006) | (0.006) |
| birthyear = 1980 | 0.027*** | 0.034*** | 0.019*** |
| | (0.005) | (0.006) | (0.007) |
| birthyear = 1981 | 0.031*** | 0.038*** | 0.023*** |
| | (0.006) | (0.006) | (0.007) |
| birthyear = 1982 | 0.032*** | 0.039*** | 0.023*** |
| | (0.006) | (0.006) | (0.007) |
| birthyear = 1983 | 0.031*** | 0.038*** | 0.021*** |
| | (0.006) | (0.006) | (0.008) |
| birthyear = 1984 | 0.033*** | 0.041*** | 0.023*** |
| | (0.005) | (0.006) | (0.008) |
| birthyear = 1985 | 0.038*** | 0.046*** | 0.027*** |
| | (0.006) | (0.006) | (0.008) |
| birthyear = 1986 | 0.036*** | 0.045*** | 0.024*** |
| | (0.006) | (0.006) | (0.008) |
| birthyear = 1987 | 0.043*** | 0.052*** | 0.030*** |
| | (0.006) | (0.007) | (0.009) |
| birthyear = 1988 | 0.046*** | 0.055*** | 0.032*** |
| | (0.006) | (0.006) | (0.009) |
| birthyear = 1989 | 0.048*** | 0.058*** | 0.033*** |
| | (0.005) | (0.006) | (0.009) |
| birthyear = 1990 | 0.054*** | 0.064*** | 0.037*** |
| | (0.006) | (0.007) | (0.009) |
| birthyear = 1991 | 0.059*** | 0.068*** | 0.039*** |
| | (0.005) | (0.006) | (0.009) |
| birthyear = 1992 | 0.059*** | 0.068*** | 0.036*** |
| | (0.004) | (0.006) | (0.010) |
| birthyear = 1993 | 0.065*** | 0.074*** | 0.040*** |
| | (0.005) | (0.007) | (0.010) |
| birthyear = 1994 | 0.072*** | 0.082*** | 0.045*** |
| | (0.004) | (0.006) | (0.010) |
| birthyear = 1995 | 0.077*** | 0.086*** | 0.047*** |
| | (0.004) | (0.006) | (0.011) |
| birthyear = 1996 | 0.079*** | 0.088*** | 0.045*** |
| | (0.007) | (0.007) | (0.011) |
| birthyear = 1997 | 0.082*** | 0.090*** | 0.042*** |

|  | (1) | (2) | (3) |
| --- | --- | --- | --- |
|  | (0.007) | (0.006) | (0.012) |
| birthyear = 1998 | 0.091*** | 0.097*** | 0.049*** |
|  | (0.009) | (0.008) | (0.012) |
| birthyear = 1999 | 0.087*** | 0.092*** | 0.044*** |
|  | (0.010) | (0.008) | (0.013) |
| birthyear = 2000 | 0.093*** | 0.096*** | 0.047*** |
|  | (0.007) | (0.007) | (0.012) |
| birthyear = 2001 | 0.097*** | 0.101*** | 0.052*** |
|  | (0.007) | (0.014) | (0.017) |
| birthyear = 2002 | 0.077*** | 0.089*** | 0.039*** |
|  | (0.003) | (0.005) | (0.011) |
| Age = 19 |  | 0.017*** | 0.016*** |
|  |  | (0.004) | (0.003) |
| Age = 20 |  | 0.010*** | 0.008*** |
|  |  | (0.004) | (0.003) |
| Age = 21 |  | 0.004 | 0.001 |
|  |  | (0.003) | (0.003) |
| Age = 22 |  | 0.002 | -0.002 |
|  |  | (0.003) | (0.003) |
| Age = 23 |  | -0.002 | -0.006** |
|  |  | (0.003) | (0.003) |
| Age = 24 |  | -0.003 | -0.008** |
|  |  | (0.003) | (0.003) |
| Age = 25 |  | -0.001 | -0.006* |
|  |  | (0.003) | (0.003) |
| Age = 26 |  | 0.001 | -0.005 |
|  |  | (0.003) | (0.004) |
| Age = 27 |  | 0.002 | -0.005 |
|  |  | (0.003) | (0.004) |
| Age = 28 |  | 0.003 | -0.005 |
|  |  | (0.004) | (0.004) |
| Age = 29 |  | 0.002 | -0.007 |
|  |  | (0.004) | (0.004) |
| Age = 30 |  | 0.004 | -0.006 |
|  |  | (0.004) | (0.004) |
| Age = 31 |  | 0.006 | -0.004 |
|  |  | (0.004) | (0.005) |
| Age = 32 |  | 0.007* | -0.004 |
|  |  | (0.004) | (0.005) |
| Age = 33 |  | 0.009** | -0.002 |
|  |  | (0.004) | (0.005) |
| Age = 34 |  | 0.010** | -0.002 |
|  |  | (0.004) | (0.005) |
| Age = 35 |  | 0.011** | -0.002 |
|  |  | (0.004) | (0.005) |
| Age = 36 |  | 0.011** | -0.002 |
|  |  | (0.005) | (0.006) |

| | (1) | (2) | (3) |
|---|---|---|---|
| Age = 37 | | 0.013*** | -0.002 |
| | | (0.005) | (0.006) |
| Age = 38 | | 0.013*** | -0.003 |
| | | (0.005) | (0.007) |
| Age = 39 | | 0.014*** | -0.002 |
| | | (0.005) | (0.007) |
| Age = 40 | | 0.014*** | -0.003 |
| | | (0.005) | (0.007) |
| Age = 41 | | 0.017*** | -0.001 |
| | | (0.004) | (0.007) |
| Age = 42 | | 0.019*** | 0.000 |
| | | (0.005) | (0.007) |
| Age = 43 | | 0.016*** | -0.004 |
| | | (0.005) | (0.007) |
| Age = 44 | | 0.023*** | 0.002 |
| | | (0.005) | (0.008) |
| Age = 45 | | 0.020*** | -0.003 |
| | | (0.006) | (0.009) |
| Age = 46 | | 0.018*** | -0.006 |
| | | (0.005) | (0.009) |
| Age = 47 | | 0.023*** | -0.002 |
| | | (0.006) | (0.009) |
| Age = 48 | | 0.025*** | -0.003 |
| | | (0.005) | (0.009) |
| Age = 49 | | 0.029*** | -0.001 |
| | | (0.005) | (0.009) |
| Age = 50 | | 0.029*** | -0.004 |
| | | (0.007) | (0.010) |
| Age = 51 | | 0.036*** | 0.001 |
| | | (0.007) | (0.010) |
| Age = 52 | | 0.038*** | 0.000 |
| | | (0.007) | (0.011) |
| Yr1980_84 | | | -0.022** |
| | | | (0.010) |
| Yr1985_89 | | | -0.038*** |
| | | | (0.009) |
| Yr1990_94 | | | -0.032*** |
| | | | (0.007) |
| Yr1995_99 | | | -0.041*** |
| | | | (0.006) |
| Yr2000_04 | | | -0.037*** |
| | | | (0.004) |
| Yr2005_09 | | | -0.043*** |
| | | | (0.003) |
| Yr2010_14 | | | -0.031*** |
| | | | (0.002) |
| Constant | 1.111*** | 1.098*** | 1.149*** |

| | (1) | (2) | (3) |
|---|---|---|---|
| | (0.003) | (0.005) | (0.011) |
| Observations | 907 | 907 | 907 |
| R-squared | 0.581 | 0.669 | 0.859 |

NOTES: Estimates are based on age-year specific number felony violent arrests per individual arrested for a violent felony, 1980-2020, limited to ages 18-52 and years of birth between 1960 and 2002. Reference birth year is 1960, reference age is 18 and reference period is 2015-2019. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

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