

MONEY, EDUCATION AND INCARCERATION

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Note: This is a working paper last updated July 2012. It draws on the author's analysis of prison admissions from the National Corrections Reporting Program and arrests and crime from the Uniform Crime Report.

People who are low income, ill-educated or unemployed are much more likely to be arrested and go to prison than more highly-educated affluent employed people (Western 2006). It is often assumed that the rise in incarceration over time tracked a rise in poverty, or that this strong individual-level difference will be found in aggregate comparisons across time or between places. This is not so, however. This paper examines the national trends over time and the comparisons between states. The time trends make it clear that imprisonment trends were uncorrelated with the cycles of poverty or unemployment, and the rise and (partial) fall in the imprisonment disparity was uncorrelated with changes in the disparity in poverty or unemployment.

It is also often assumed that much of the racial difference in imprisonment is due to poverty or educational differences. This is also not true. The racial disparity in incarceration is not appreciably reduced when education is controlled. Table 1 shows the estimated probability of a man's ever having been imprisoned in two national samples as presented by Western (2006) supplemented by the implied disparity ratios (which are calculated by dividing the Black percentage by the White percentage). As the table indicates, there are substantial educational disparity ratios within race: men who did not graduate high school are much more likely to have spent time in prison, and those who have been to college are much less likely to have spent time in prison. But there remain substantial racial disparities within educational groups. Further, most of the within-education racial disparities are larger than the within-race educational disparities, and the racial disparities are generally higher for more educated men. Turning this around, the educational disparities are lower for Blacks than Whites. That is, education made a bigger difference in the chances of going to prison for a White man than a Black man.¹ This project uses aggregate-level data and does not control for individuals' education. But there is no basis for believing that a control for education or poverty would reduce the salience of the race effect in aggregate data.

Further, there are some surprising patterns across states. Consistent with previous research, economic factors have only weak relations with imprisonment trends. While, as we would expect, the rate of White

imprisonment higher in states where White poverty was higher, the rate of Black imprisonment was actually lower in states where Black poverty was higher! The relationship is weak and appears to be driven by the low Black imprisonment rates of Southern states. At the state level, there is the expected positive relation between the Black/White disparity in poverty and the Black/White disparity in poverty. However, these state-level relations are not replicated when the unit of analysis is the metro area, where the main pattern is a zero or very weak correlation between economic factors and imprisonment.

PRIOR RESEARCH

Past studies of the predictors of aggregate incarceration rates (across all races) have gotten varied results, depending on exactly which time periods and geographic units are studied, what the dependent variable is, and exactly which other independent variables are controlled. Arvanites (1992) examined the effects of economic factors on state imprisonment rates controlling for crime in 1980 and 1988 and found a greater effect of racial composition and a lower effect of crime in 1988 than 1980; unemployment was unrelated to imprisonment, while poverty was positively related to imprisonment in 1980 and negatively in 1988. He concludes that the correlation between incarceration rates and poverty is a spurious effect: it is percent Black that is the strong predictor of the total incarceration rate. Arvanites and Asher (1995) report similar results. Arvanites and Asher (1998) review a wide variety of studies with conflicting results about the effects of unemployment and poverty on incarceration rates, citing studies that did and did not find positive relations, sometimes with and sometimes without controls for crime, and in their own analysis of the predictors of state rates of imprisonment and incarceration in county jails similarly find mixed results for the effect of absolute and relative measures of economic standing and racial composition. Carmichael (2005) examines the correlates of jail use in 157 cities in 1983 (before the incarceration boom) with a supplemental analysis of 1999, finding that racial differences in income along with the size of the minority population predict jail incarceration rates.

Similarly, many studies have examined the impact of economic factors on crime rates, again with mixed results. Jacobs reports in several studies (e.g., 1978; 1981) that measures of economic inequality are related to measures of crime. Crutchfield, Geerken and Gove (1982) found that rates of low income or education or employment were not powerful predictors of crime rates. Messner (1982) analyzed the effect of poverty and

inequality on the homicide rate in 204 SMSAs finding no effect of inequality and a negative weak effect of absolute poverty. Loftin and Parker (1985) used infant mortality data to provide instruments for poverty and conclude that poverty affects homicide rates in 49 cities. Sampson (1987) examines race-specific rates of robbery and homicide in 150 US cities in 1980, finding that scarcity of employed men leads to female-headed households, which is related to crime, especially by juveniles. Patterson (1991) studied community victim reported crime rates in 1977 in Rochester NY, St Louis MO and Tampa-St.Petersberg FL, finding that absolute poverty was strongly associated with neighborhood crime rates, but transient populations and youthful populations mattered more. Petras and Davenport (1991) analyze crime rates 1954-1986 in five cities, concluding that community attributes are intervening, not causal variables, and that deindustrialization is the major factor. Harer and Steffensmeier (1992) report that income inequality has a stronger effect on White arrests for violent crimes but little effect on Black arrest rates in 1980. LaFree, Drass and O'Day (1992) examine annual national time series of Black and White robbery, burglary and homicide arrests 1957-1988 find similar results to the 1996 paper. Martinez (1996) examined the Latino murder rate in 111 cities in the US in 1980, finding that education and income affected homicide rate, as well as region of the country and city size. LaFree and Drass (1996) examine the national time series of Black and White robbery, burglary and homicide arrests 1957-1990 finding that rising educational attainment is associated with rising arrests during periods of growth in income inequality, while for Whites rising educational attainment is associated with reduced crime rates during periods of declining inequality. Levitt (1999) reports that property crime victimization was increasingly concentrated among the poor, while there was no relation between neighborhood family income and homicide rates in Chicago in 1990s. Parker and Pruitt (2000) study Black and White homicide rates from the Urban Underclass database finding that both poverty and poverty concentration affect the White homicide rate, but that the Black rate is affected only by the poverty measure, not poverty concentration.

The great variability in the conclusions of these studies suggests both that the underlying relation between poverty and imprisonment (or crime) is weak and that the relation is contingent. The expectation of a strong relation between the poverty rate and the imprisonment rate is driven by the naïve belief that imprisonment is largely a function of crime. But we have already shown that most of the variation in the number of prison sentences for ordinary crimes (violence, robbery/burglary, theft) remains unexplained after controls for the

number of crimes, that the increasing ratio of prison sentences to crimes drove the imprisonment boom, not the number of crimes, and that most of the “action” in rising and falling imprisonment rates has been due to drug sentences and, for Whites, “other” offenses (especially drunk driving) that are not in the crime indexes. Imprisonment rates are more a function of responses to crime than a function of crime. When this is recognized, it is not surprising that studies seeking to relate imprisonment rates to aggregate socio-economic factors have come up with weak and inconsistent results.

SOURCES OF SOCIO-ECONOMIC DATA

Annual data on poverty, unemployment and income at the national level come from the March supplement to the Census Bureau’s Current Population Survey. This is a sample and there is enough sampling error for smaller states and minority populations even in larger states to make it difficult to rely on the information for assessing the impact of local changes in the economic situation. Sampling error for states with smaller populations of a given race can be quite high, leading to substantial year-to-year fluctuations due to sampling error rather than genuine annual trends. For this reason, these variables should be averaged across multiple years or put through smoothing algorithms for analysis.² For comparing states and MSAs, data on economic factors come from the 1% or 5% samples in the decennial censuses of 1980, 1990 and 2000. These larger samples are less volatile but still contain substantial error for small populations. Linear interpolations for annual rates between censuses are misleading as they obscure the impact of economic cycles, but these measures do capture the impact of between-place variation. The 1980 census was conducted as poverty and unemployment were rising into the recession of the early 1980s; the 1990 and 2000 censuses were conducted at the end of boom periods when unemployment and poverty had been falling, just before subsequent increases. Static differences between places at the time of the Census also capture differences in the dynamic effects of economic cycles on places. In short, the nature of the data makes it difficult to assess dynamic relations between economic factors and incarceration.

NATIONAL TIME TRENDS

Let’s take a look first at how imprisonment was related to poverty and unemployment across time. Figure 1 shows the White national trends in unemployment, poverty, imprisonment and prison admissions. The economic downturns of 1981-84, 1992-4 and after 2001 can be clearly seen in the White graph, where it is also clear that the

White imprisonment rate was largely uncorrelated with these trends. The trends for Blacks (Figure 2) and Hispanics (Figure 3) similarly show no correlation over time with the trends in poverty or unemployment. For all three groups, the rate of imprisonment was generally rising regardless of the economic trends, and the steepest increase in prison admissions occurred in the late 1980s when poverty and unemployment were falling for all groups. Falling unemployment and poverty rates were associated with rising imprisonment rates 1993-1989 and 1994-2000. The dip in prison admissions in the early 1990s was associated with rising unemployment and poverty.

Figure 4 shows the national trend in the Black/White disparity ratio for imprisonment, poverty and unemployment, and Figure 3 shows the disparity trends for Hispanics. Again, the graphs suggest very little correlation between imprisonment and economic indicators. For Blacks, the imprisonment disparity skyrocketed in the late 1980s while the disparities in poverty and unemployment were relatively flat. There are minor indications that the decline in the Black poverty disparity in the late 1970s and early 1980s was associated with a decline in the imprisonment disparity and the rise in the imprisonment disparity in 1986-88 is associated with a rise in the Black poverty (but not unemployment) disparity, but these small periods of consistency stand against the long trend of inconsistency in the data. For the Hispanic disparity, there is little change over time in the disparity for any factor and the main trend is that the Hispanic disparity for all variables seems to have been declining in the late 1990s.

DIFFERENCES BETWEEN STATES: IMPRISONMENT RATES

What about comparisons between states within eras? When we look for differences between states within three time periods centered on 1980, 1990 and 2000, we get a different picture. Figure 5 summarizes the signed squared correlation between state-level economic and education variables imprisonment rates by race for the CPUS imprisonment rate and the various NCRP prison admission rates. Each column displays a different variable: percent in poverty, percent aged 26-39 who are not high school graduates, percent aged 26-39 who are college graduates, percent of families with incomes greater than five times the poverty level (high income), and the median family income. All signed r^2 s are derived from bivariate correlations between one economic/educational variable and one imprisonment rate. Each bar displays the relationship for one time period; there are three bars for the CPUS "in prison" rate and two for the NCRP prison admission rates. The top row shows

correlations for all races, the second row for Whites, the third for Blacks and the fourth for the Black/White Disparity. All correlations are within race. The figure makes it clear that the correlations for all races are higher than those within race, indicating that much of the apparent effect of poverty or low education is confounded with race. For Whites, the relationships are not strong but are in the expected direction and stronger around 2000 than around 1990. For Blacks, the relationship is not what would be expected. Surprisingly, Black prison admissions were higher where Blacks were more educated and had higher incomes, although this relation is generally weak and stronger around 1990 than around 2000. The disparity relation is in the expected direction: The Black/White disparity in imprisonment is substantially higher where Blacks are poorer or less educated.

The source of the anomalies for Blacks is the fact that poverty was generally higher and education lower in the South where the percent Black was higher and the Black imprisonment rate and the Black/White imprisonment disparity were lower. We thus turn to MSA-level data to see if we can clarify these patterns. It turns out that the anomalies occur in the non-metro balance of states, while the pattern within metro areas is the almost complete non-significance of the average income or education in predicting imprisonment rates.

PRISON ADMISSIONS IN METROPOLITAN AND RURAL AREAS

Rural areas typically have lower incomes and higher poverty rates than urban areas, and some of the state-level difference in average economic well-being is due to the level of urbanization. Using the NCRP data, we can compare rural to metro areas and compare urban areas to each other. Figure 6 for 1990 and Figure 7 for 2000 show that most metro areas had substantially lower White poverty rates than most non-metro areas. Comparing the non-metro balances of states, the correlation between the White poverty rate and the White prison sentence rate was essentially zero in 1990 but had become moderately positive in 2000. Recall from Chapter 7 that the greatest growth in White imprisonment was in White-dominated rural areas. The growing association between White poverty and White imprisonment in rural areas suggests that this rise may have been related to White poverty. However, also recall that crime did not go up after 1995 in these areas; the rise in imprisonment was due to the rise in the prison/crime ratio for violence and the rise in drug and “other” sentences.

The source of the anomalous negative Black correlations can be seen in Figure 8 for 1990 and Figure 9 for 2000. Although Blacks in rural areas tend to have higher poverty rates than Whites in rural areas, the relation

between poverty and urbanity is much lower for Blacks than for Whites. The correlation between the poverty rate and the Black prison sentence rate is zero for both all areas (as shown in the figures) and for metro areas only.

METRO AREAS

Figure 10 displays the signed R2s for the correlations between economic and educational factors and prison admissions in metropolitan areas in three eras: 1988-1992, 1993-1997, and 1998-2001. The story is quite clear: for Blacks, most of the correlations are very low and not consistently in the predicted direction. Even the disparity correlations are relatively low. For Whites, the correlation is much stronger for education than poverty: metropolitan areas in which Whites are less educated have higher White imprisonment rates. The figure also shows the relations for the combination of Whites and Hispanics as we will next consider arrests and arrest data groups Hispanics with Whites. Combining Hispanics with Whites increases the correlation of imprisonment with poverty and low education because Hispanics are both poorer and less educated and more likely to be imprisoned.

We may examine the relation between the poverty rate and different components of the prison sentence rate: arrests, crime, and the ratios of arrest to crime and of prison to arrest and crime. Crime reports are not disaggregated by race, so we begin with the correlations for all races combined in Figure 11. Crime is reported only for the three categories of violence, robbery/burglary and theft; arrests also include drug crimes and other offenses. Both the percent poor and the percent who are not high school graduates are positively correlated to the crime rate, but the percent with lower education is more strongly related to the imprisonment and arrest rates. Although they are low, the correlations for the arrest/crime ratio are negative, meaning that metro areas in which more people are poor have lower arrest/crime ratios within offense group than areas in which fewer people are poor.

Figure 12 for Whites and Hispanics combined shows that low education is especially strongly correlated with prison sentences and arrests, and poverty also has significant correlations. The prison/arrest ratio is also positively correlated with the proportion who are not high school graduates, especially for drug offenses. But Figure 13 for Blacks reveals only very weak correlations for the relation between imprisonment and poverty and education. So, similar to what could be seen at the individual level in Table 1 is replicated at the aggregate level: education makes a bigger difference for Whites than for Blacks in the likelihood of imprisonment.

These patterns could be distorted by the percent Hispanic in an area and by the known negative relationship between percent minority and the minority imprisonment rate. To control for this, we first regress the imprisonment rate on the log of the Black population, the percent Black and the percent Hispanic. Then we add in the economic or educational factor in question and calculate the change in the R2. To capture the direction of the relation, we then multiply this R2 by the sign of the coefficient. The results of this are shown graphically in Figure 14 for all races, Figure 15 for Blacks, Figure 16 for Whites+Hispanics and Figure 17 for the disparity ratio. The relations for Blacks attenuate somewhat but exhibit roughly the same patterns as the bivariate relations. That is, very weak relationship between socio-economic factors and the Black imprisonment rate. For Whites+Hispanics and all races combined, controlling for the racial demographics of the area substantially reduces the apparent importance of poverty and low education for imprisonment rates. After controls, there is a consistent positive but modest relation between the poverty disparity and the disparity in prison sentences and arrests for Whites+Hispanics and all races combined.

We also checked to see whether the baseline poverty rate or the change in the poverty rate affected the change in imprisonment rates between the late 1980s and the late 1990s. The answer is: not very much. For metro areas, the strongest patterns for Blacks are that the change in the arrest rate was negatively associated with the proportion high income for ordinary crimes but not drug crimes ($R^2 \sim .2$) and positively associated with the proportion poor for property crimes ($R^2 \sim .1$). For Whites+Hispanics there were no net effects of any magnitude.³

In short, the story for metropolitan areas is that economic variables have essentially very low predictive power for either White or Black imprisonment rates, and educational levels have weak predictive value for Whites but not Blacks.

NON-METRO AREAS

Even though all we have is a crude separation of the non-metropolitan balance of each state from the urban parts of the state, distinguishing rural from urban areas helps to explain the reversals seen at the state level in the Black correlations and also helps us to explain the surprising rise in imprisonment in White rural areas. There are only 27 states for which we have consistent NCRP data for the non-metro balance. We do not have useable arrest data for rural areas. So these relations are all based on small numbers and need to be interpreted with caution. Figure 18 shows the bivariate correlations by race between economic and educational factors and prison

admission rates. We note that the relations seem strong for all races and Whites plus Hispanics, especially for the percent who are not high school graduates. Further, there are many reversals over the expected relations for Blacks, with imprisonment rates being weakly negatively correlated with the proportion of high school drop outs. We also see the surprising fact that Black imprisonment rates are higher where a higher percentage of Blacks are college graduates! And the positive correlation with the disparity ratio is even higher! That is, rural areas in which the Black/White ratio in percent who have graduated college is higher had higher Black/White imprisonment ratios! Figure 19 shows the relationship after controls for percent Black, percent Hispanic, and the log of the Black population size. With controls, the relation between White poverty and White imprisonment becomes weak and unstable: it is generally negative in the late 1980s earlier and positive by the late 1990s. We will see this pattern again when we examine change scores. We also see that the proportion of high income people also is frequently positively rather than negatively related to imprisonment, suggesting that perhaps inequality—a combination of both poor and affluent people is especially conducive to high imprisonment rates for Whites.

The Black relations for poverty become positive and larger with controls, especially for property crime, and the poverty disparity becomes strongly positively associated with the imprisonment disparity. So with proper controls, the coefficients are in the expected direction. Total admissions and revocations are higher for Blacks where there is a higher percentage of college graduates.

Figure 20 shows the bivariate correlations and Figure 21 the signed R^2 differences after demographic controls in the rural balances for all races combined between economic and educational factors and prison sentences, crimes and the prison/crime ratio. The bivariate correlations are generally large, but most of the explanatory power lies in the areas' racial mix. The presence of high income people seems to be related to higher rates of crime and imprisonment for some offense groups, and the coefficients for poverty become negative. That is, after demographic controls, crime and imprisonment are lower where poverty is higher!

In the next set of figures, the dependent variable is the change in the rate from the 1988-1992 average to the 1998-2001 average. In all cases, the chart shows the change in the R^2 for predicting the dependent variable after controlling for the log of the Black population, the percent Black and the percent Hispanic. Figure 22 shows that the change in the prison admission rates in rural areas for Whites was strongly positively related to the 1990 percent of Whites who were poor, and strongly negatively related to the percent high income and the median

income. White imprisonment went up more in rural areas where Whites were poor. Figure 23 shows the effect of the change in the economic/educational factor on the change in the imprisonment rate; Figure 24 shows the effect of the change when the baseline level of the independent variable is also controlled. Overall, White rural imprisonment rates went up more where White poverty was higher but the change in poverty was not strongly associated with the change in imprisonment; the change in White imprisonment was negatively correlated with the change in the percent of White high school dropouts and weakly positively correlated with the percent of college graduates. Black imprisonment went up more where the baseline level of high school dropouts was higher but, as for Whites, the change in Black imprisonment was negatively correlated with the change in Black high school drop outs. Controlling for the baseline poverty level, the change in the Black poverty level was positively associated with the change Black imprisonment. Again, this is for the 27 state non-metro balances only, so the n's are small.

Looking at the crime and imprisonment rates for all races, Figure 25 shows the effect of the baseline economic/educational factors on the change in social control, Figure 26 shows the effect of the change in the economic/educational factors, and Figure 27 shows the effect of the change net of the baseline. Imprisonment in rural areas rose more where people had less money; crime also rose more where people had less money, although those relationships are weaker than for imprisonment. But the change in imprisonment was negatively correlated with the change in poverty and education, and the change in crime was uncorrelated with anything.

CONCLUSIONS

Although at the individual level people with low income and education are much more likely to end up in prison than those with higher income and education, the levels of poverty or other economic indicators were not generally strong predictors of the aggregate imprisonment rates either as they changed over time or as they varied between places. The major exception to this generalization is the pattern for Whites in rural areas, where poverty does seem to be associated with rising imprisonment and, to a lesser extent, crime.

The national imprisonment trends over time bore no relation to trends in poverty or unemployment. The massive increase in Black imprisonment in the late 1980s was not any simple response to changes in Black poverty or unemployment. The steady increase in White imprisonment in the 1990s occurred during a long period of

economic boom. Comparing places, we see a seeming paradox at the state level that is partially resolved when we examine area-level rates. White imprisonment rates (especially for ordinary nondrug crimes) are positively related to levels of White poverty at both the state and area level. States with a higher proportion of poor White people do have a weak tendency to have a higher White imprisonment rate. But Black imprisonment rates are negatively related to Black poverty at the state level. States with less Black poverty have some tendency to have higher Black imprisonment rates. However, there is a positive relation between the poverty disparity and the imprisonment disparity at the state level: states in which the ratio of Black poverty to White poverty is higher do tend to have high Black to White imprisonment ratios. We note, however, that many of the states with low Black rates are Southern states with significant rural Black populations. Considering only urban areas, at the metro area level, Black poverty has a weak positive relation to Black prison sentences for ordinary nondrug crimes, but not for drug crimes, where the relation is zero.

The mass incarceration of Blacks for the drug war in the late 1980s occurred primarily in the big cities where Black poverty rates were lower than in rural areas. But the growing association between Black poverty and Black imprisonment over time, coupled with the positive correlation between changes in Black poverty and changes in Black imprisonment point to the possibility of feedbacks in which imprisonment increases poverty.

White imprisonment was from the start much more strongly associated with White poverty and especially low White educational attainment. In the metro areas, there is a strong correlation between the proportion of younger White adults who are high school drop outs and the White imprisonment rate that attenuates but remains significant under controls. In addition, there is a strong positive effect of White poverty and ill-education in rural areas that became stronger over time. The White poverty rate was strongly positively associated with the rise in White imprisonment in rural areas, but the change in White poverty was not associated with the change in White imprisonment after control for the baseline.

If data are not disaggregated by race, low income (and the correlates of low income, including low education and family instability) are strong predictors of aggregate imprisonment and arrest rates. This is because the average economic differences between Black and White areas are enormous. But economic factors do not explain away the huge racial differentials in imprisonment. At the individual level, the available data shows that there is racial disparity in imprisonment after education is controlled. There is some positive correlation between

Black poverty and Black imprisonment after appropriate demographic controls, but it is modest. The relational factor of the Black/White disparity in poverty or education has a much stronger relation to the disparity in imprisonment than there is between the absolute levels of poverty and imprisonment.

At the same time, disaggregating the data by race and type of place has revealed that there is a substantial economic and educational cleavage among Whites. Some of the relation is spurious, but even after demographic controls, there is always a strong relation between White education and White imprisonment. The growth in White imprisonment in the 1990s was in rural areas and White-dominated smaller cities and the aggregate correlations suggest that the rural growth especially was greater in places where Whites were poorer. Because the data we have in this project are insufficient for unpacking the details of these patterns, we will have to leave untangling it for a future project.

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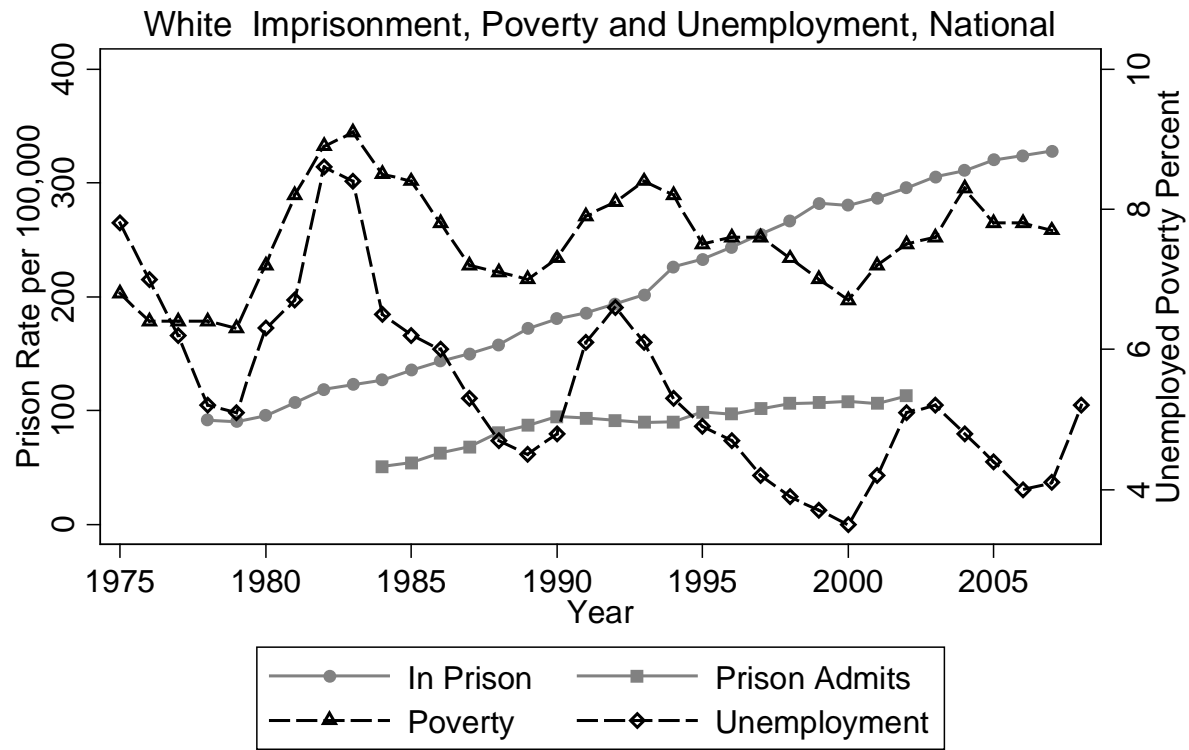
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TABLE 1. ESTIMATED PERCENT EVER IMPRISONED FOR MEN, BY RACE, EDUCATION AND DATA SOURCE

	Cumulative Risk of Imprisonment					Educational Disparity Ratios		
	All	Less than HS	HS/GED	All non-college	Some College	LTHS vs College	LTHS vs HS/GED	Some Coll vs HS/GED
White								
BJS	3							
NLSY	4.3	11.3	3.7	5.1	1.5	7.5	3.1	2.5
Born 1945-9	1.4	4.0	1.0	2.1	0.5	8.0	4.0	2.0
Born 1965-9	2.9	11.2	3.6	5.3	0.7	16.0	3.1	5.1
Black								
BJS	24.6							
NLSY	18.7	30.9	18.8	19.3	7.2	4.3	1.6	2.6
Born 1945-9	10.5	17.1	6.5	12	5.9	2.9	2.6	1.1
Born 1965-9	20.5	58.9	18.4	30.2	4.9	12.0	3.2	3.8
Black/White Disparity Ratio								
BJS	8.2							
NLSY	4.3	2.7	5.1	3.8	4.8	0.6	0.5	1.1
Born 1945-9	7.5	4.3	6.5	5.7	11.8	0.4	0.7	0.6
Born 1965-9	7.1	5.3	5.1	5.7	7.0	0.8	1.0	0.7

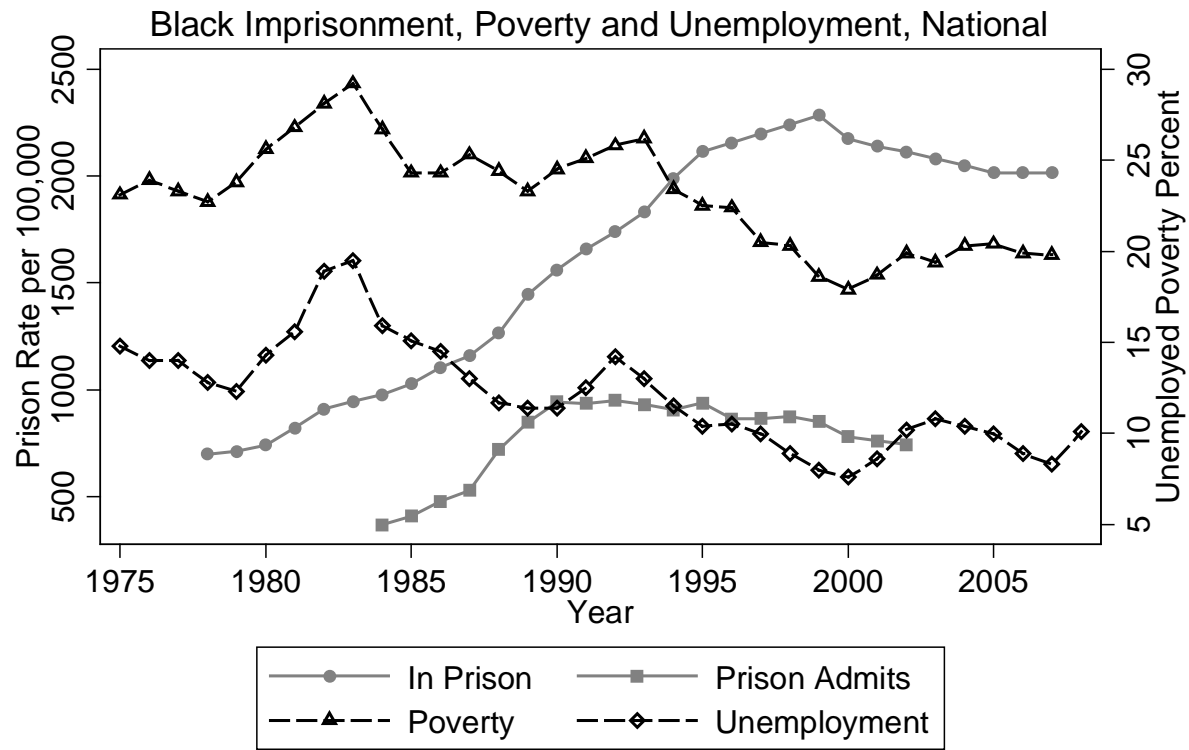
Estimated cumulative risk of imprisonment from page 33 of Bruce Western, Punishment and Inequality in America; disparity ratios calculated by Pamela Oliver. BJS=Bureau of Justice Statistics. NLSY=National Longitudinal Survey of Youth.

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In Prison from CPUS all 50 states
 Prison Admits from NCRP, 18-32 states
 Unemployment & Poverty Rates National

FIGURE 1. WHITE IMPRISONMENT, POVERTY AND UNEMPLOYMENT, NATIONAL



In Prison from CPUS all 50 states
 Prison Admits from NCRP, 18-32 states
 Unemployment & Poverty Rates National

FIGURE 2. BLACK IMPRISONMENT, POVERTY AND UNEMPLOYMENT, NATIONAL

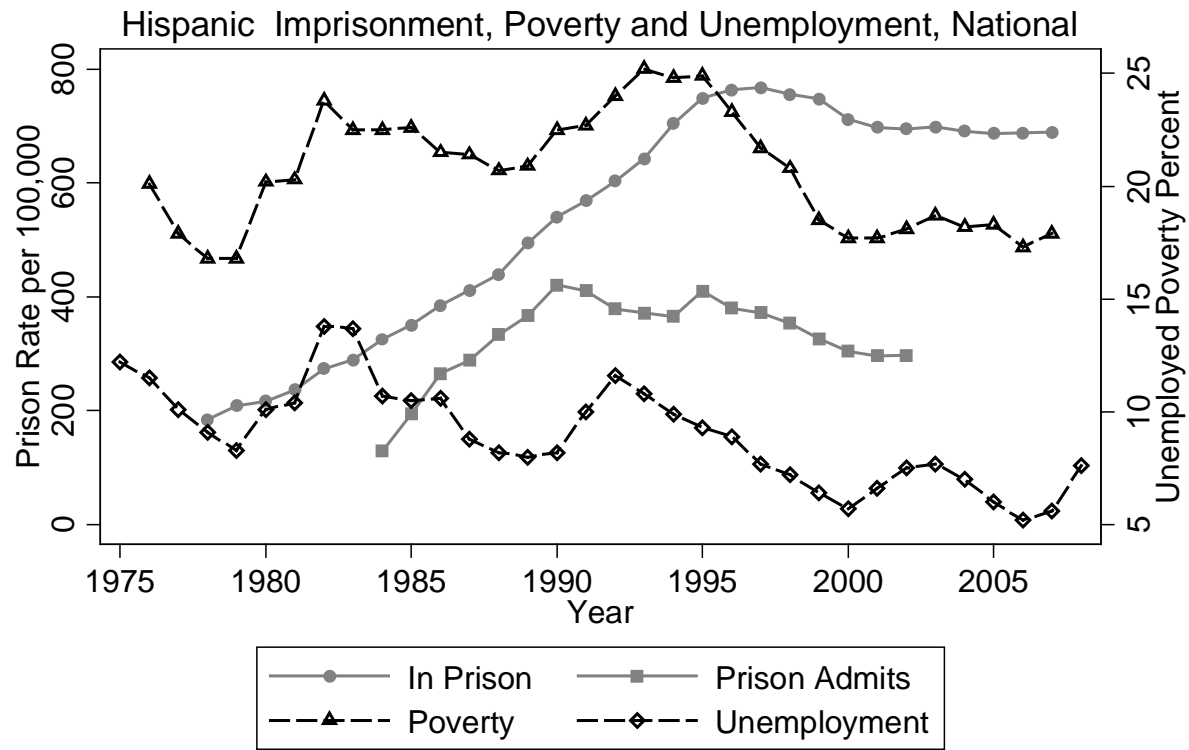
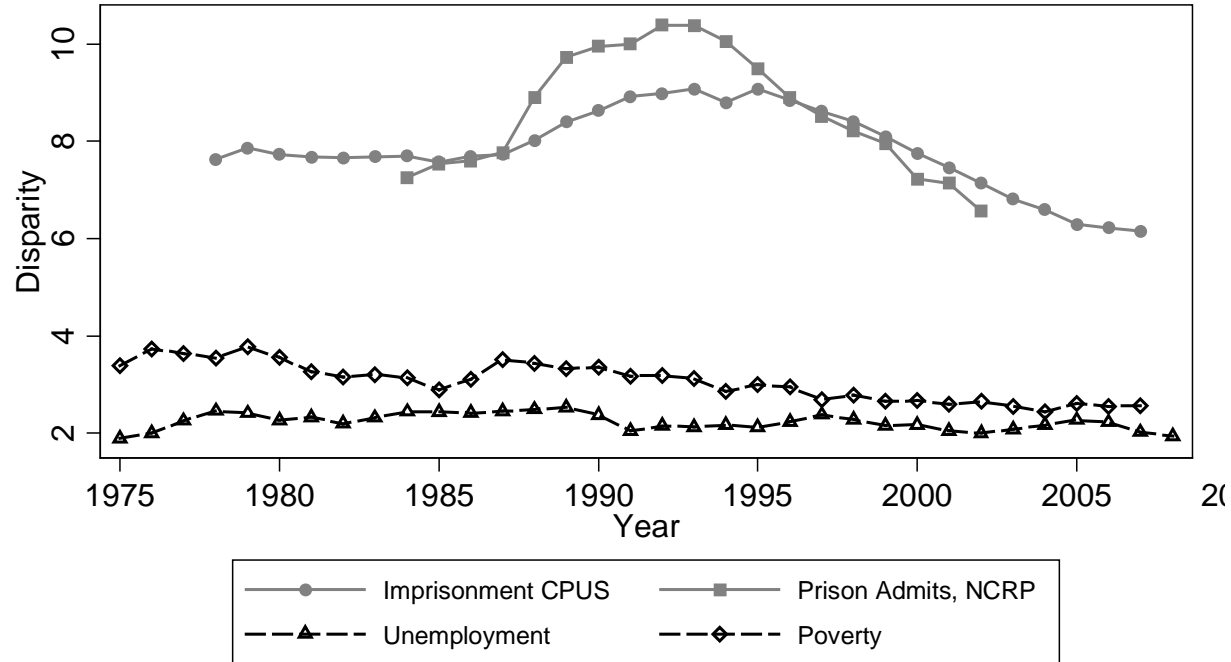


FIGURE 3. HISPANIC IMPRISONMENT, POVERTY AND UNEMPLOYMENT, NATIONAL

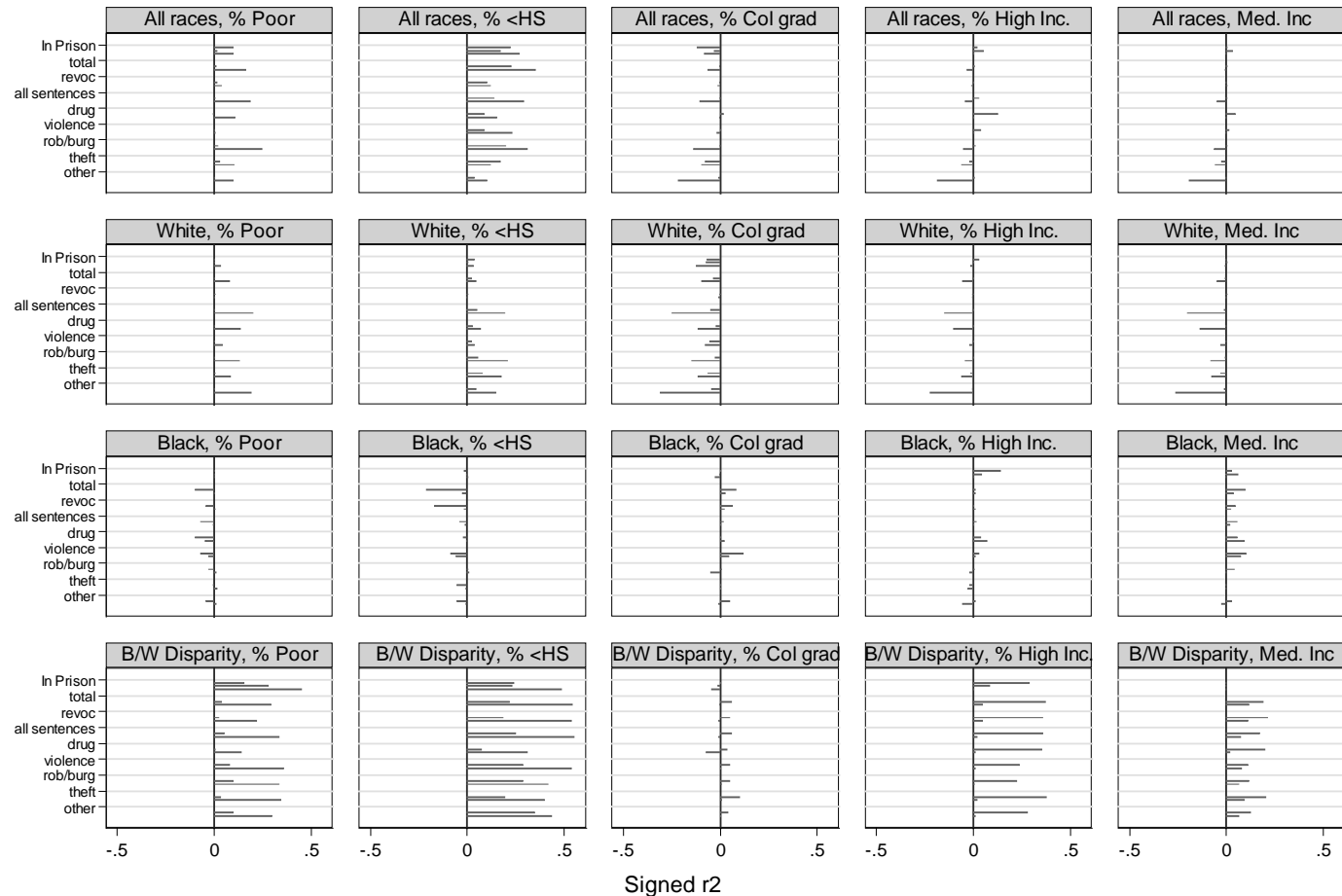
Black Disparity in Imprisonment and Unemployment, National



In Prison from CPUS all 50 states
 Prison Admits from NCRP, 18-32 states
 Unemployment Rate National
 Disparity is ratio of Black to White NH Rates

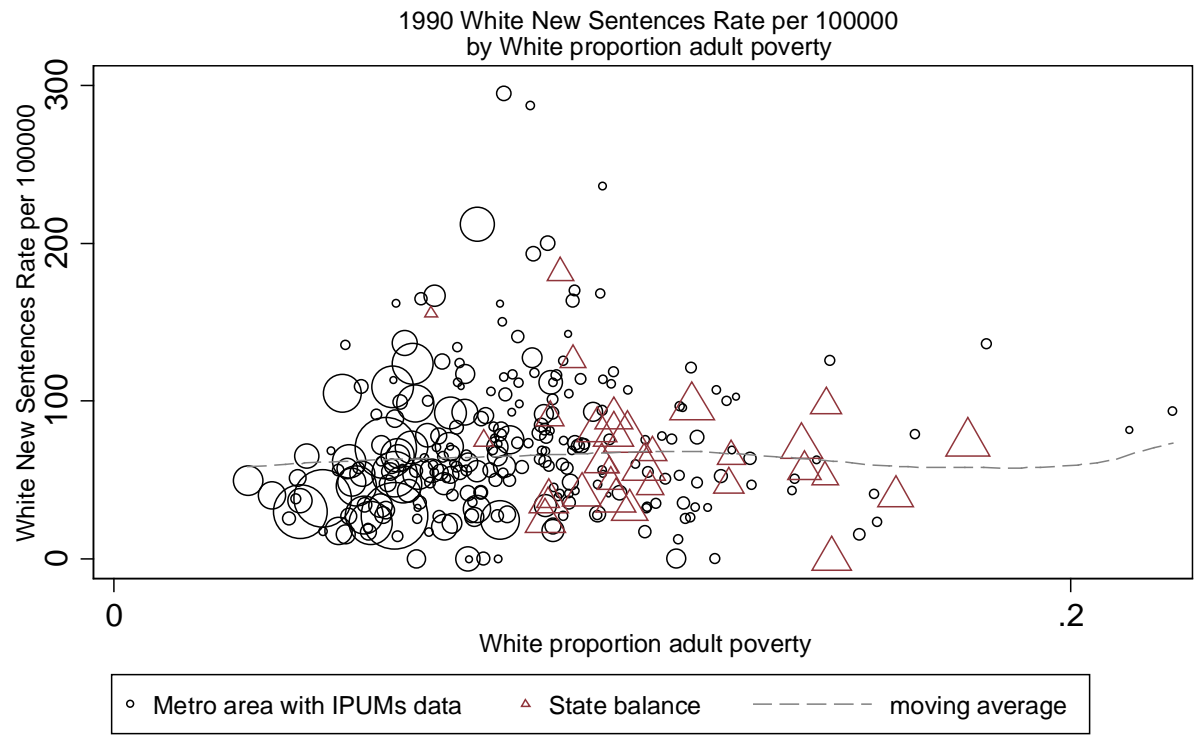
FIGURE 4. BLACK/WHITE DISPARITY IN IMPRISONMENT, POVERTY AND UNEMPLOYMENT, NATIONAL

Signed squared correlations between economic & educational factors and imprisonment rates for US states



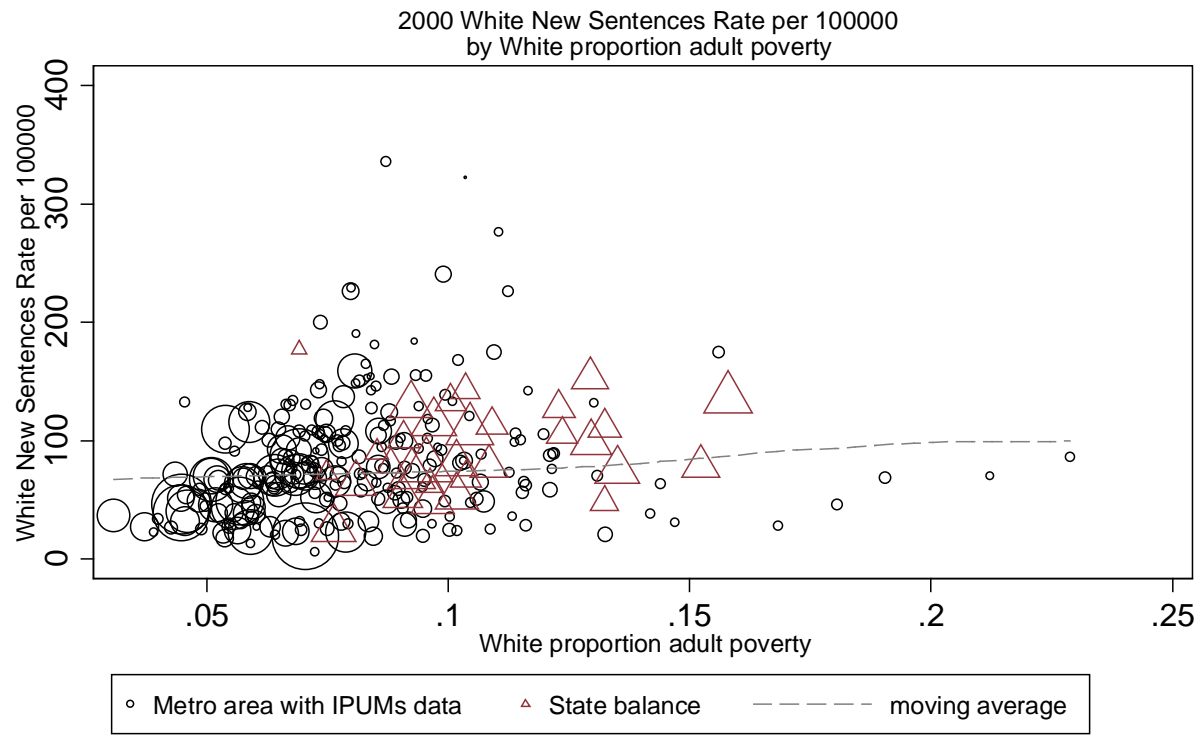
Separate bar for each time period: 1988-1992, 1993-1997, 1998-2001
 Each sub-graph is within indicated racial group

FIGURE 5. CORRELATION BETWEEN ECONOMIC AND EDUCATIONAL FACTORS AND IMPRISONMENT RATES FOR US STATES



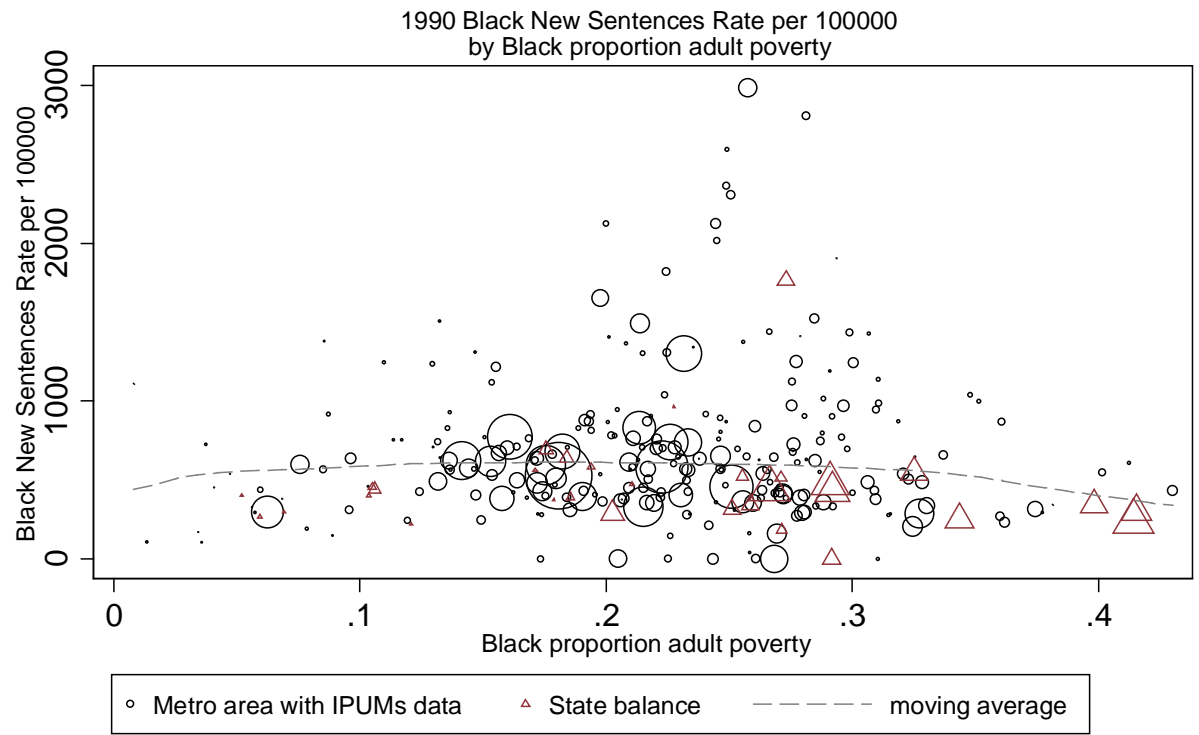
Correlation=-.09; r2=.01. Weighted by White population.
5-year average for imprisonment rate
All areas

FIGURE 6. WHITE NEW SENTENCE RATE BY PERCENT OF ADULTS IN POVERTY, 1990



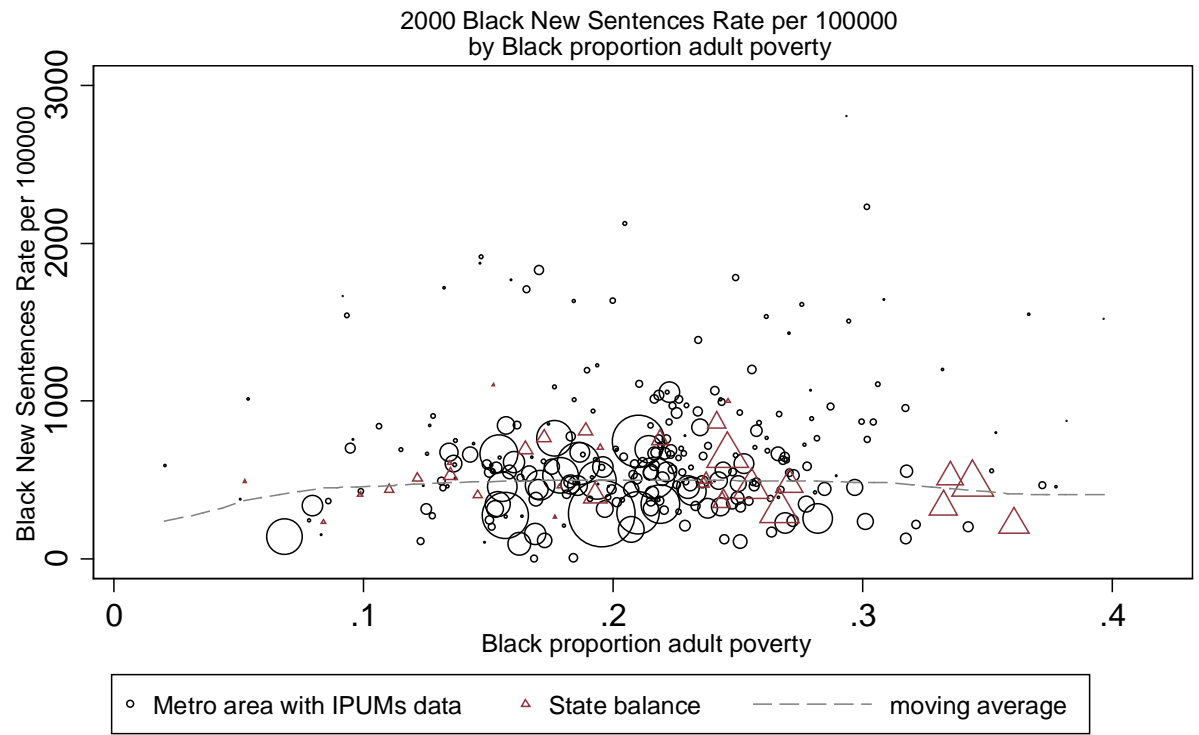
Correlation=.38; r2=.14. Weighted by White population.
5-year average for imprisonment rate
All areas

FIGURE 7. WHITE NEW SENTENCE RATE BY PERCENT OF ADULTS IN POVERTY, 2000



Correlation=-.13; r2=.02. Weighted by Black population.
5-year average for imprisonment rate
All areas

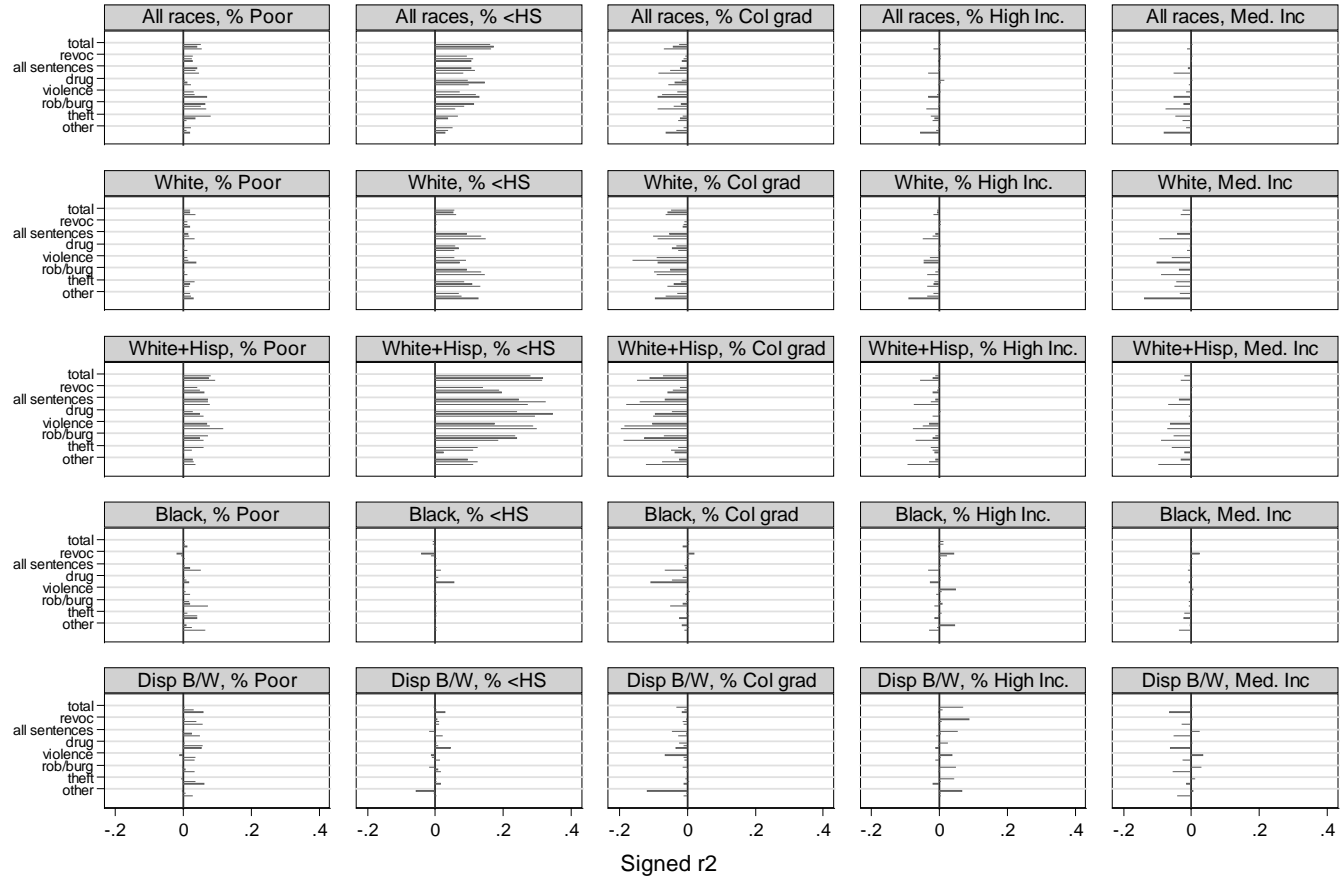
FIGURE 8. BLACK NEW SENTENCE RATE BY PERCENT OF ADULTS IN POVERTY, 1990



Correlation=.03; r2=0. Weighted by Black population.
5-year average for imprisonment rate
All areas

FIGURE 9. BLACK NEW SENTENCE RATE BY PERCENT OF ADULTS IN POVERTY, 2000

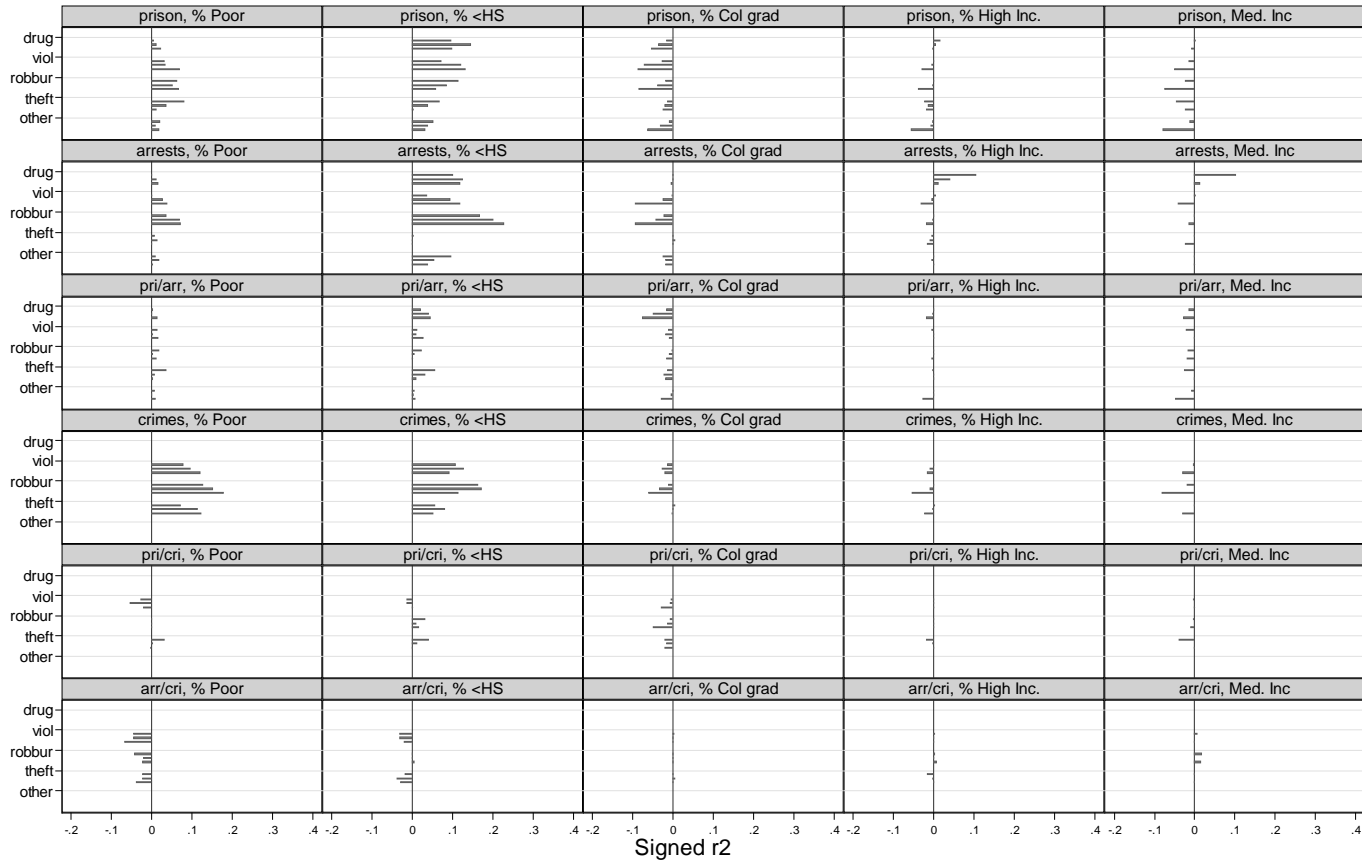
Signed squared correlations between socio-economic factors and prison admissions, metro areas



Separate bar for each time period: 1988-1992, 1993-1997, 1998-2001
 Each sub-graph is within indicated racial group

FIGURE 10. CORRELATION BETWEEN ECONOMIC AND EDUCATIONAL FACTORS AND IMPRISONMENT RATES FOR METROPOLITAN AREAS

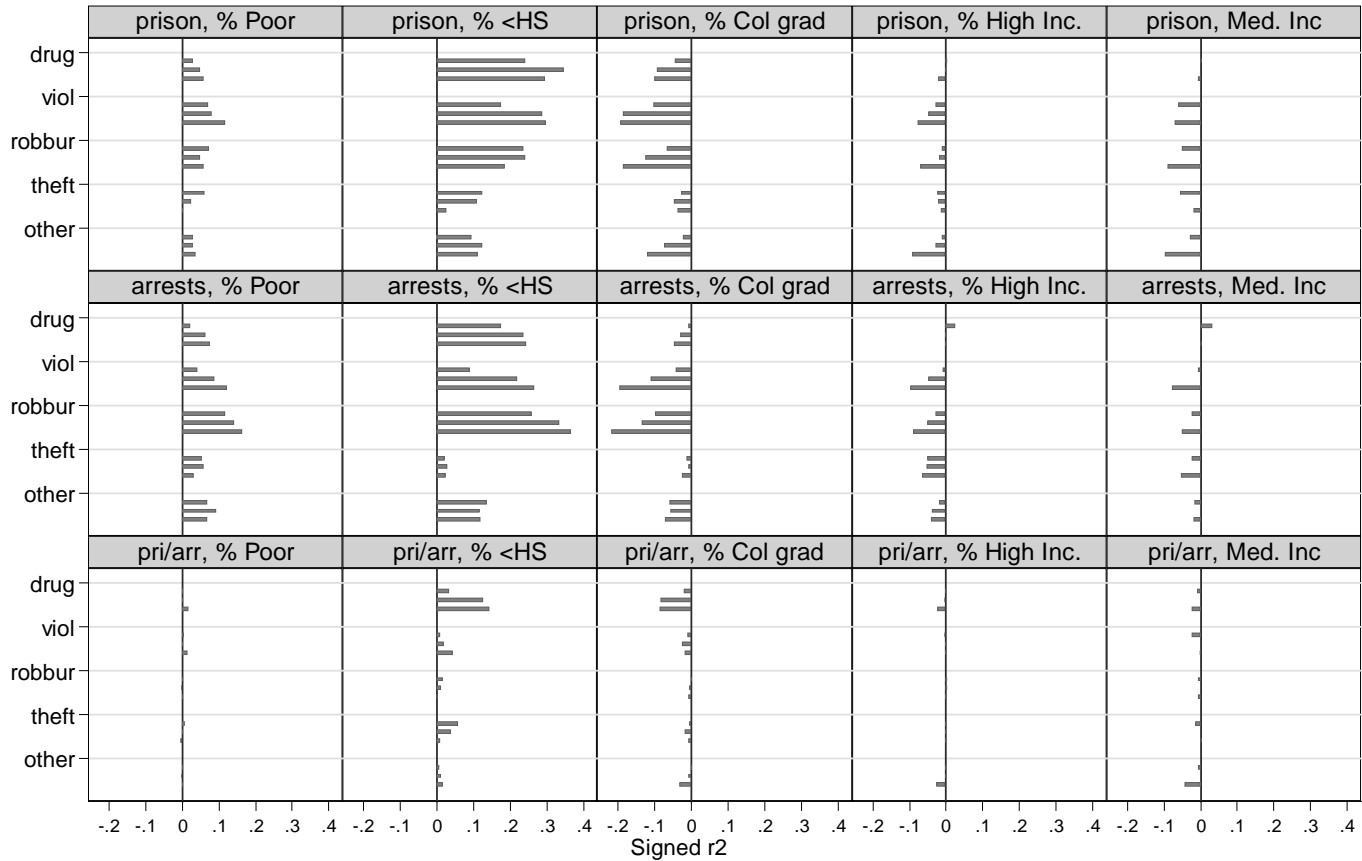
Signed squared correlations between all races socio-economic factors and social control variables metro areas



Separate bar for each time period: 1988-1992, 1993-1997, 1998-2001
Correlations are within indicated racial group

FIGURE 11. CORRELATION BETWEEN ECONOMIC AND EDUCATIONAL FACTORS AND SOCIAL CONTROL MEASURES FOR METROPOLITAN AREAS, ALL RACES

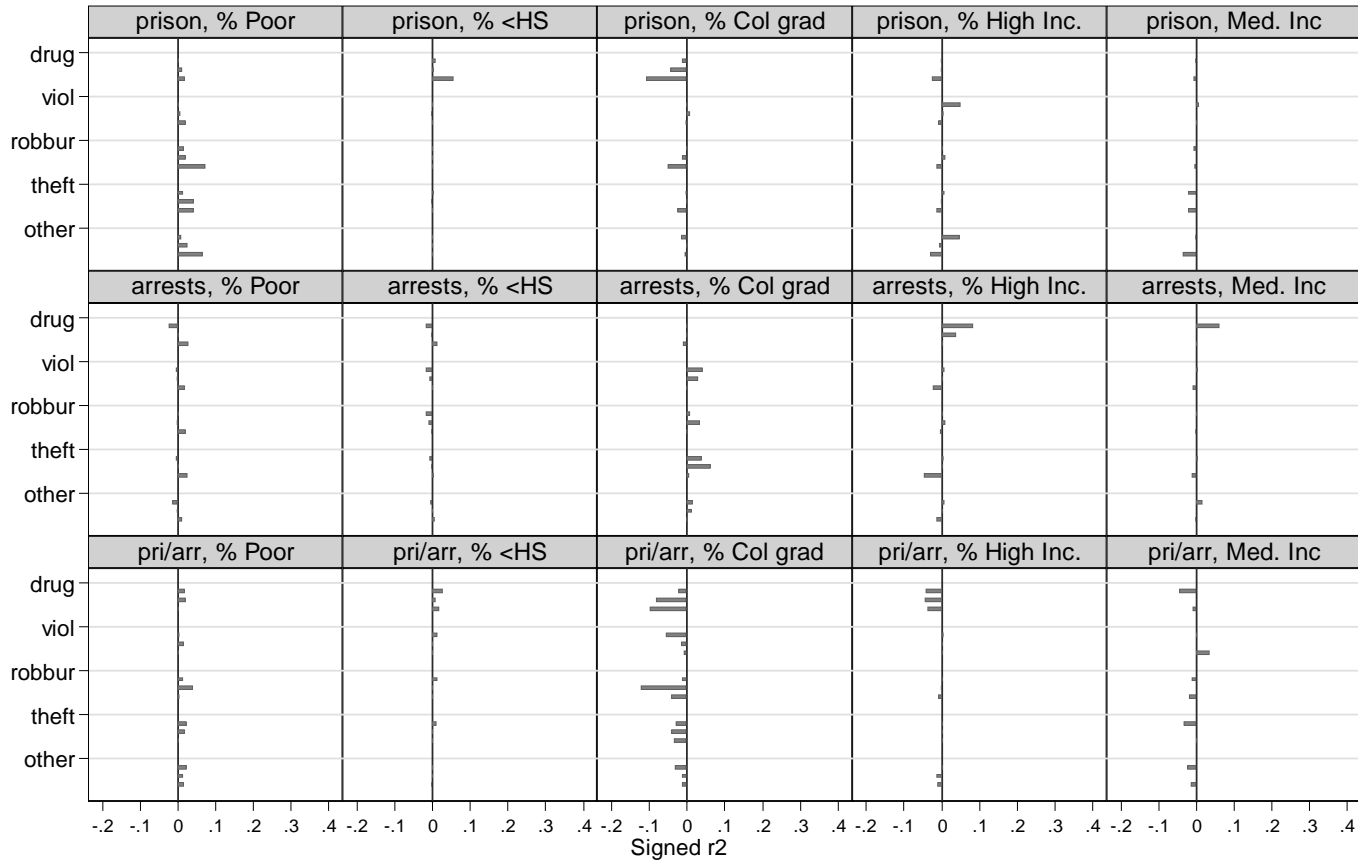
Signed squared correlations between White + Hispanic socio-economic factors and social control variables metro areas



Separate bar for each time period: 1988-1992, 1993-1997, 1998-2001
Correlations are within indicated racial group

FIGURE 12. CORRELATION BETWEEN WHITE + HISPANIC ECONOMIC AND EDUCATIONAL FACTORS AND SOCIAL CONTROL MEASURES FOR METROPOLITAN AREAS

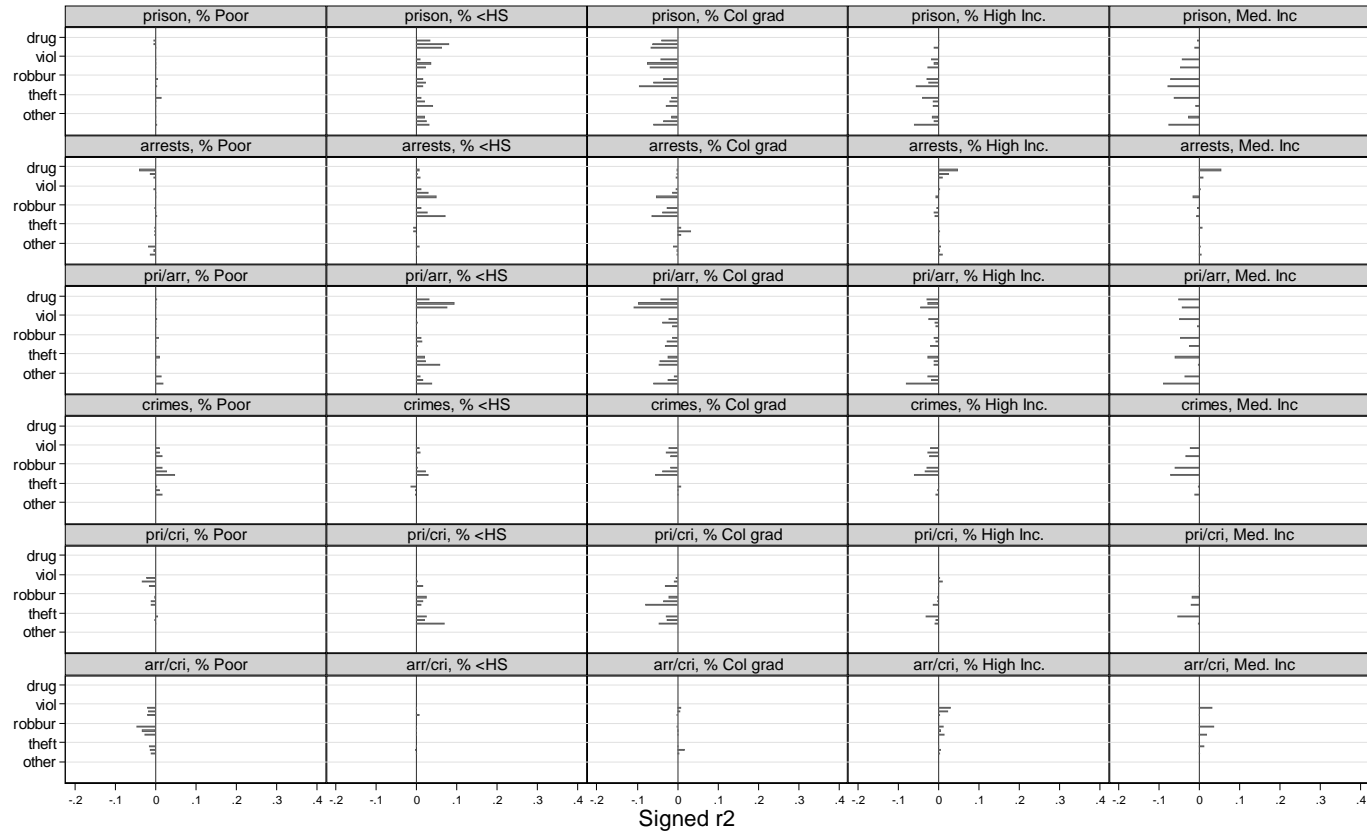
Signed squared correlations between Black socio-economic factors and social control variables metro areas



Separate bar for each time period: 1988-1992, 1993-1997, 1998-2001
Correlations are within indicated racial group

FIGURE 13. CORRELATION BETWEEN BLACK ECONOMIC AND EDUCATIONAL FACTORS AND SOCIAL CONTROL MEASURES FOR METROPOLITAN AREAS

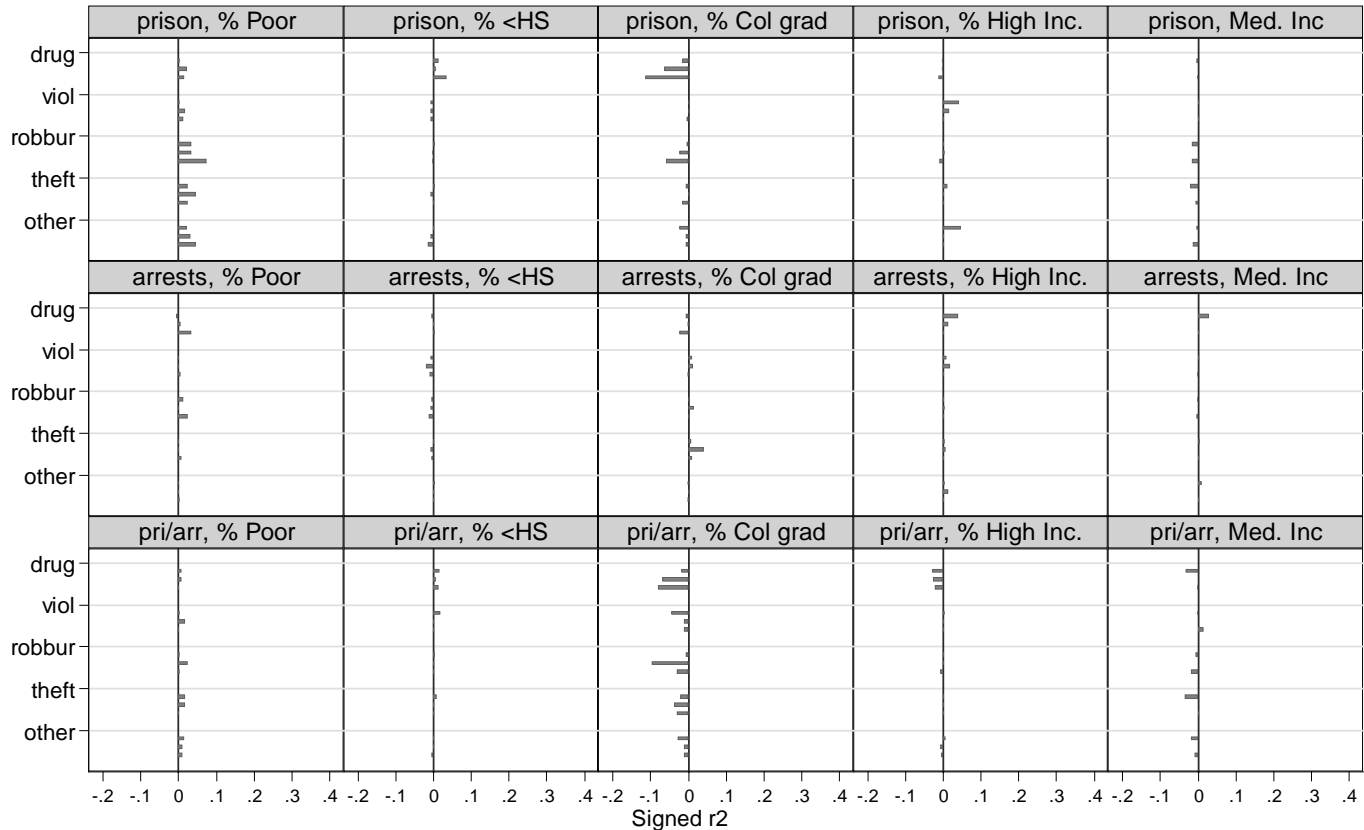
Signed R2 difference for effect of all races socio-economic factors on social control variables, metro areas



Separate bar for each time period: 1988-1992, 1993-1997, 1998-2001
 Each sub-graph is within indicated racial group
 *Difference in R2 after controls for racial composition and urbanity multiplied by sign of effect coefficient

FIGURE 14. EFFECT OF ECONOMIC AND EDUCATIONAL FACTORS ON SOCIAL CONTROL MEASURES AFTER DEMOGRAPHIC CONTROLS, METROPOLITAN AREAS, ALL RACES COMBINED

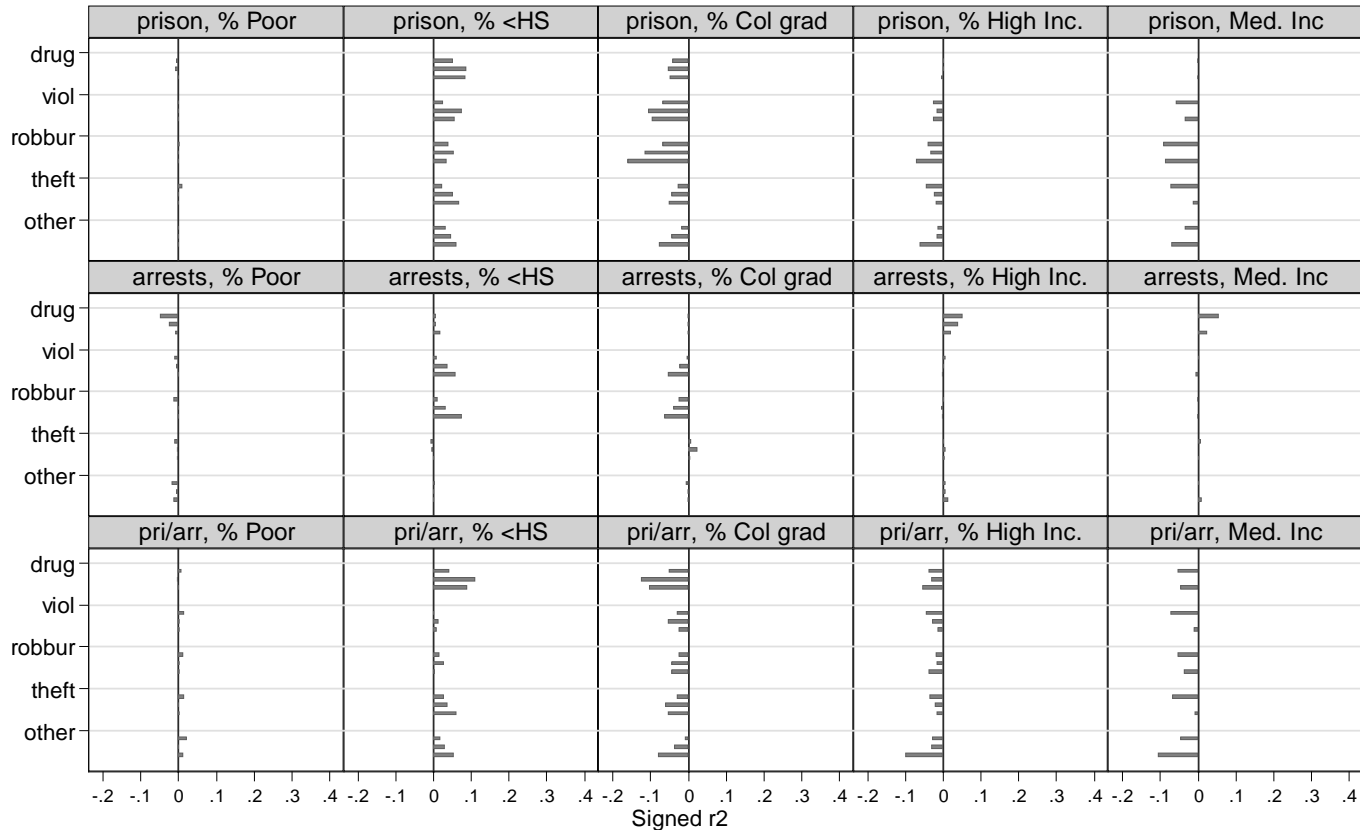
Signed R2 difference for effect of Black socio-economic factors on social control variables, metro areas



Separate bar for each time period: 1988-1992, 1993-1997, 1998-2001
 Each sub-graph is within indicated racial group
 *Difference in R2 after controls for racial composition and urbanity multiplied by sign of effect coefficient

FIGURE 15. EFFECT OF BLACK ECONOMIC AND EDUCATIONAL FACTORS ON SOCIAL CONTROL MEASURES AFTER DEMOGRAPHIC CONTROLS, METROPOLITAN AREAS

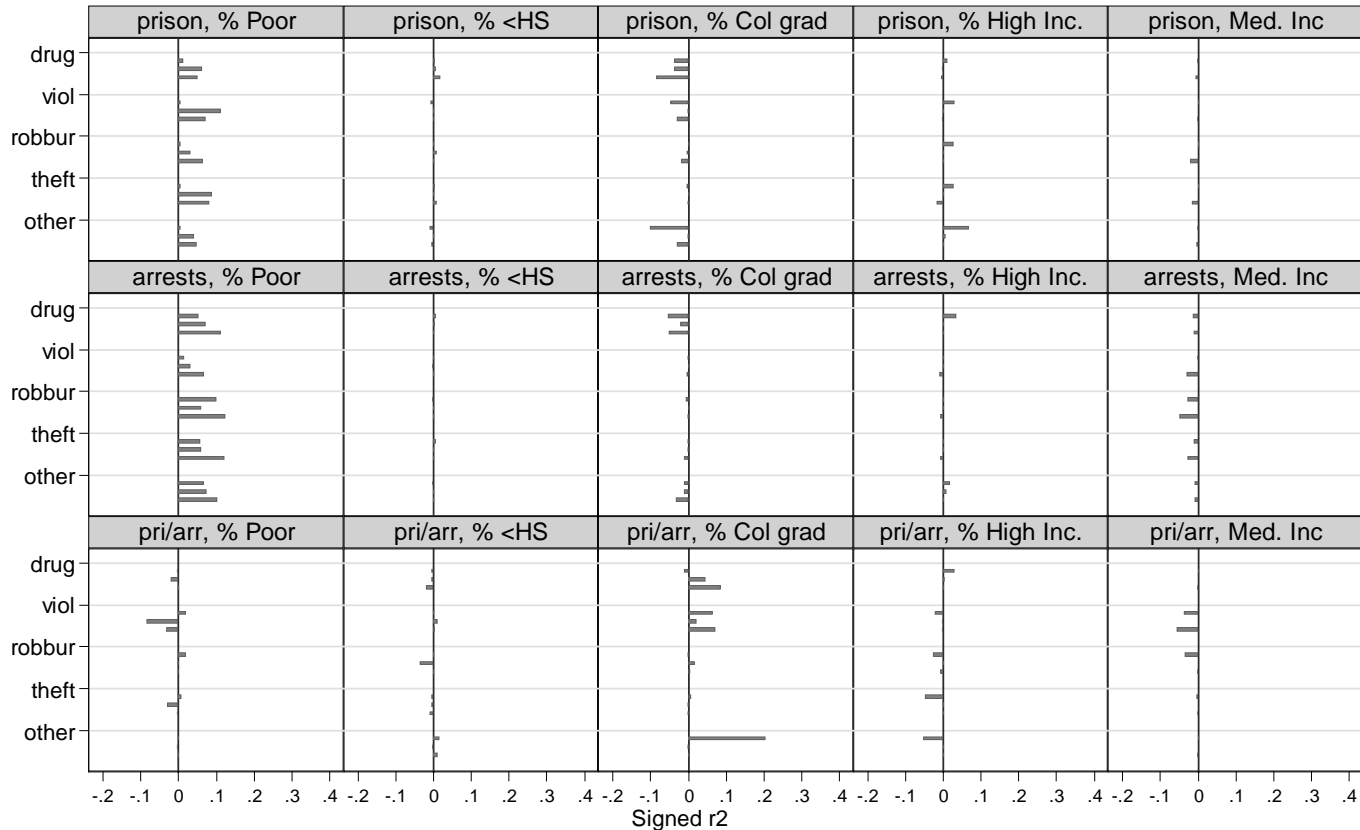
Signed R2 difference for effect of White + Hispanic socio-economic factors on social control variables, metro areas



Separate bar for each time period: 1988-1992, 1993-1997, 1998-2001
 Each sub-graph is within indicated racial group
 *Difference in R2 after controls for racial composition and urbanity multiplied by sign of effect coefficient

FIGURE 16. EFFECT OF WHITE + HISPANIC ECONOMIC AND EDUCATIONAL FACTORS ON SOCIAL CONTROL MEASURES AFTER DEMOGRAPHIC CONTROLS, METROPOLITAN AREAS

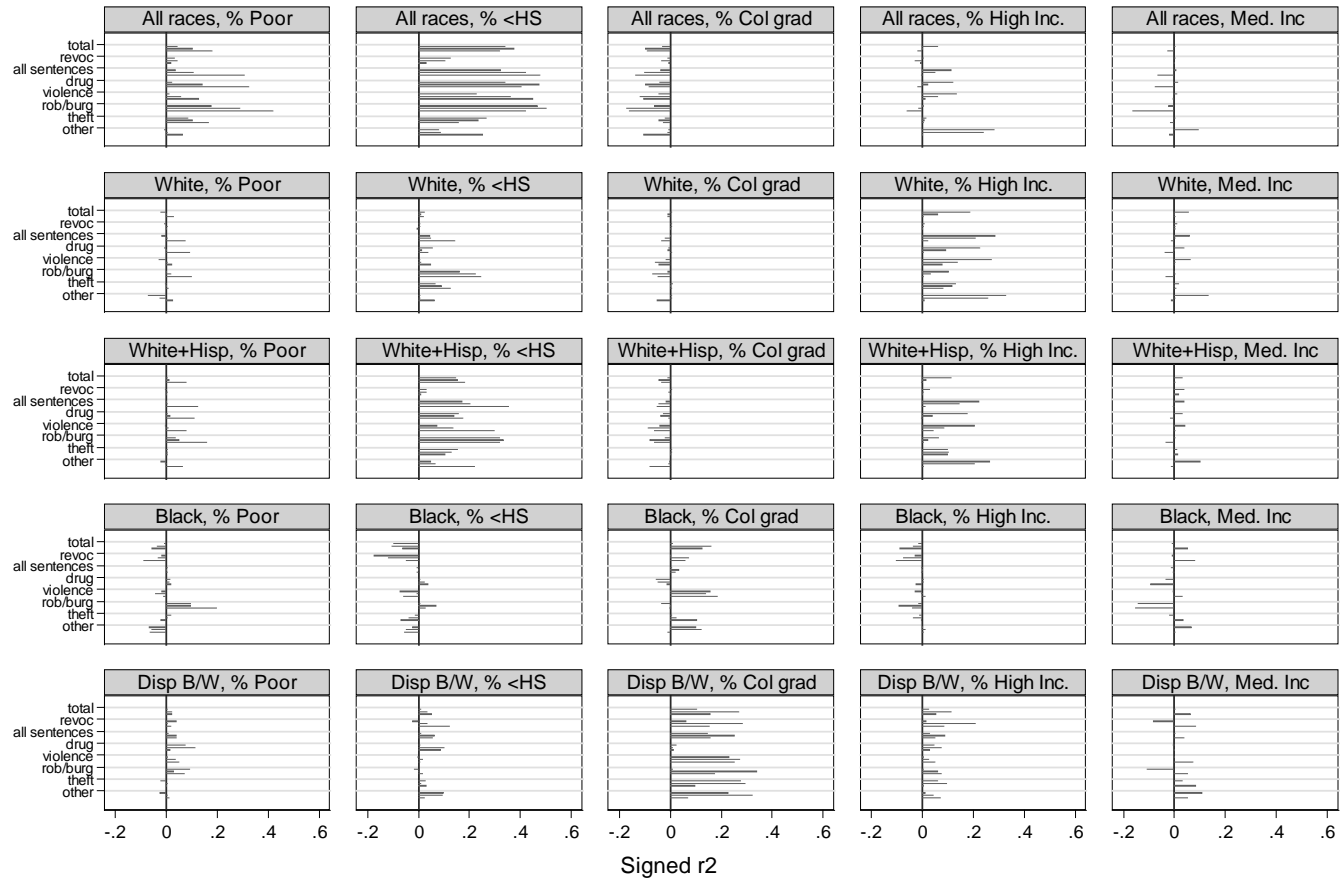
Signed R2 difference for effect of B/W+H disparity in socio-economic factors on social control variables, metro areas



Separate bar for each time period: 1988-1992, 1993-1997, 1998-2001
 Each sub-graph is within indicated racial group
 *Difference in R2 after controls for racial composition and urbanity multiplied by sign of effect coefficient

FIGURE 17. EFFECT OF BLACK TO WHITE + HISPANIC DISPARITY IN ECONOMIC AND EDUCATIONAL FACTORS ON SOCIAL CONTROL MEASURES AFTER DEMOGRAPHIC CONTROLS, METROPOLITAN AREAS

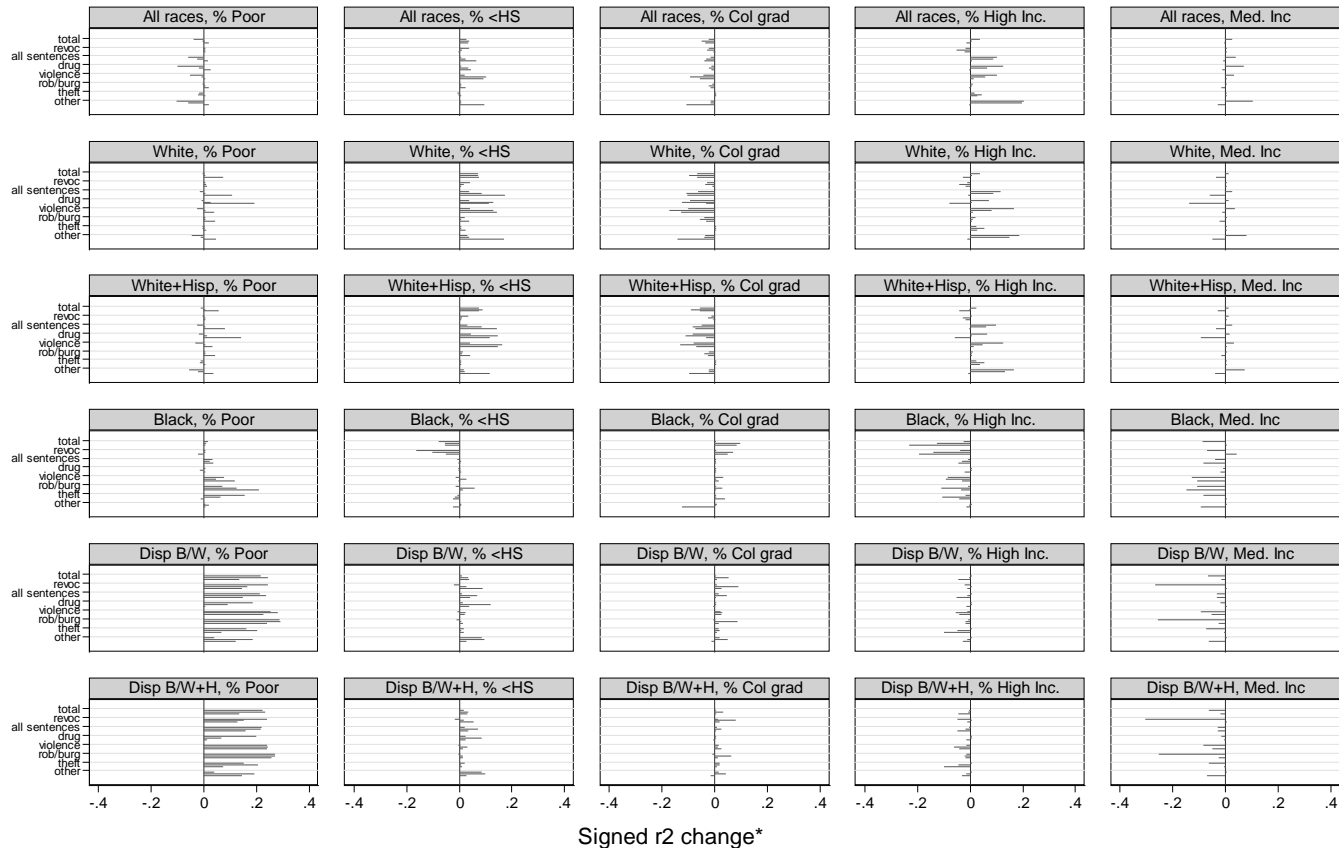
Signed squared correlations between socio-economic factors and prison admissions, non-metro areas



Separate bar for each time period: 1988-1992, 1993-1997, 1998-2001
 Each sub-graph is within indicated racial group

FIGURE 18. CORRELATION BETWEEN ECONOMIC AND EDUCATIONAL FACTORS AND IMPRISONMENT RATES FOR NON-METROPOLITAN AREAS

Signed R2 difference for effect of socio-economic factors on prison admissions, non-metro areas



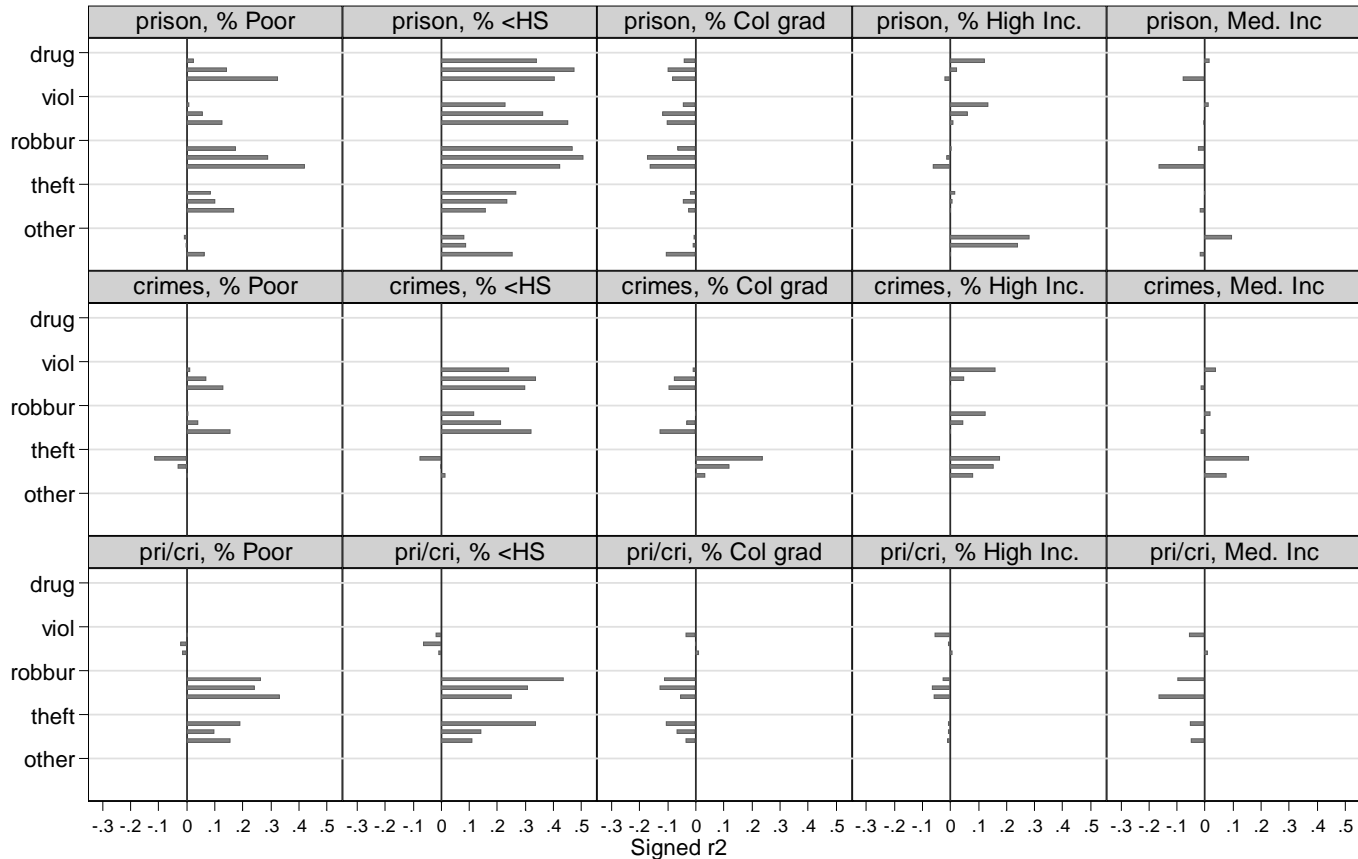
Separate bar for each time period: 1988-1992, 1993-1997, 1998-2001

Each sub-graph is within indicated racial group

*Difference in R2 after controls for racial composition and urbanity multiplied by sign of effect coefficient

FIGURE 19. EFFECT OF ECONOMIC AND EDUCATIONAL FACTORS ON PRISON ADMISSION RATES AFTER DEMOGRAPHIC CONTROLS, NON-METROPOLITAN AREAS, BY RACE

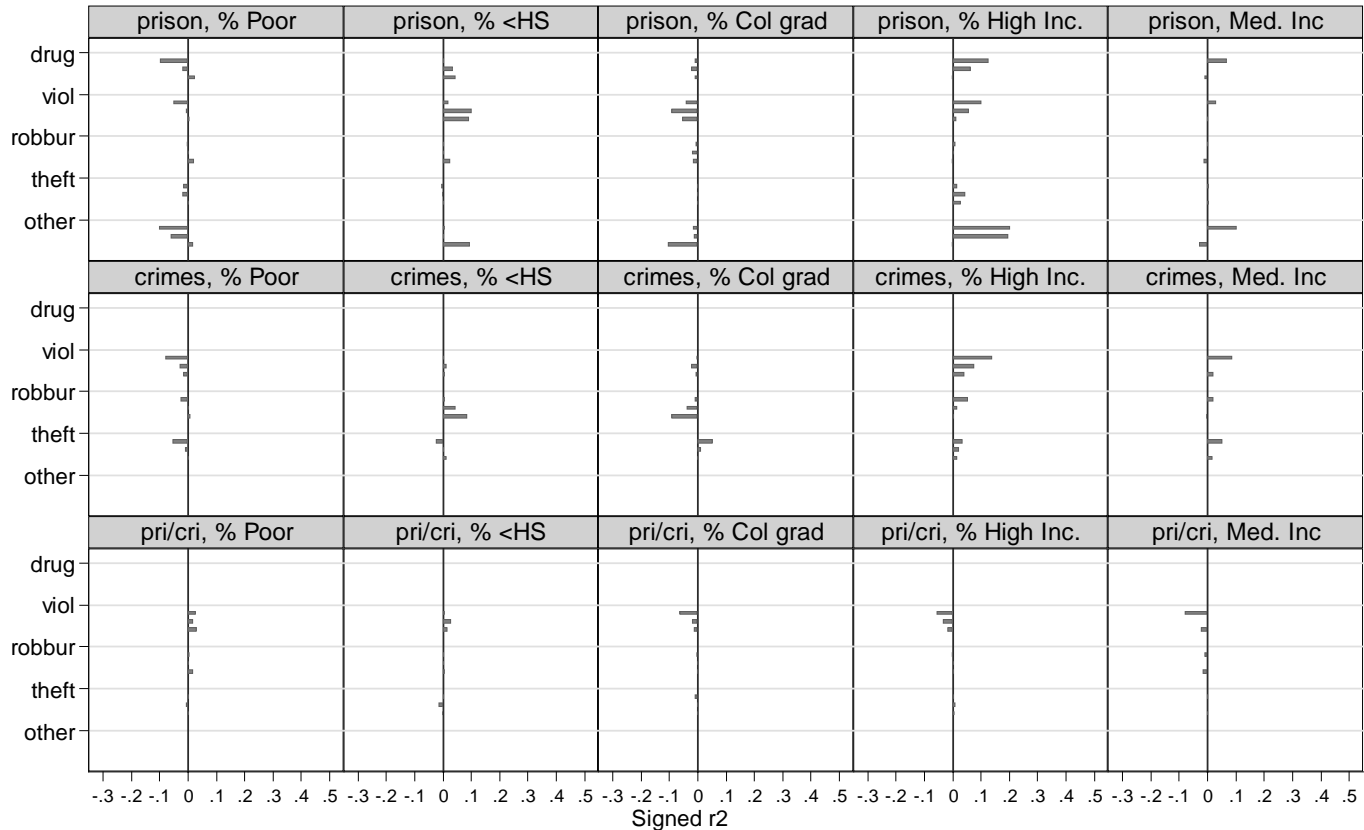
Signed squared correlations between all races socio-economic factors
and social control variables non-metro areas



Separate bar for each time period: 1988-1992, 1993-1997, 1998-2001
Correlations are within indicated racial group

FIGURE 20. CORRELATION BETWEEN ECONOMIC AND EDUCATIONAL FACTORS AND SOCIAL CONTROL MEASURES FOR NON-METROPOLITAN AREAS, ALL RACES

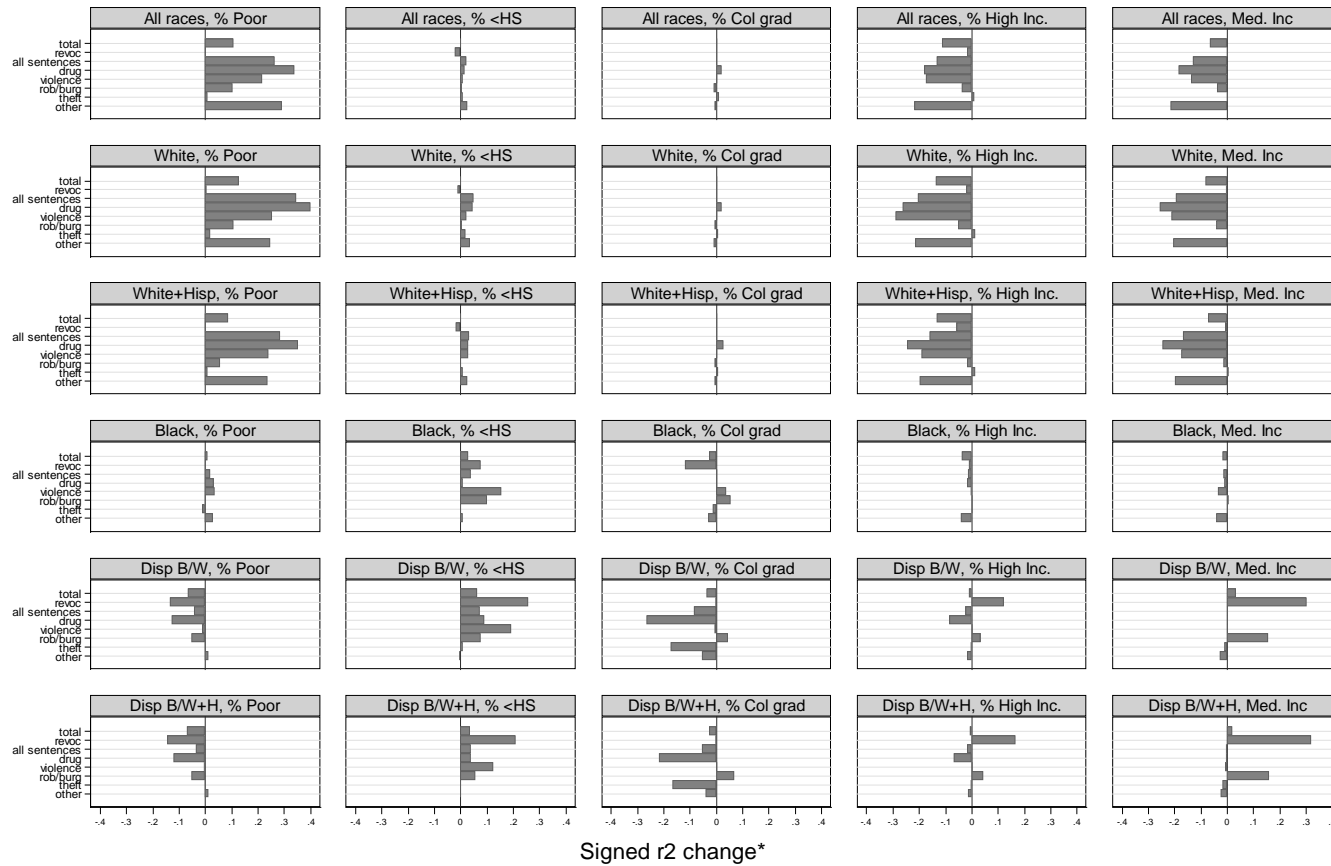
Signed R2 difference for effect of all races socio-economic factors on social control variables, non-metro areas



Separate bar for each time period: 1988-1992, 1993-1997, 1998-2001
 Each sub-graph is within indicated racial group
 *Difference in R2 after controls for racial composition and urbanity multiplied by sign of effect coefficient

FIGURE 21. EFFECT OF ECONOMIC AND EDUCATIONAL FACTORS ON SOCIAL CONTROL MEASURES AFTER DEMOGRAPHIC CONTROLS, NON-METROPOLITAN AREAS, ALL RACES COMBINED

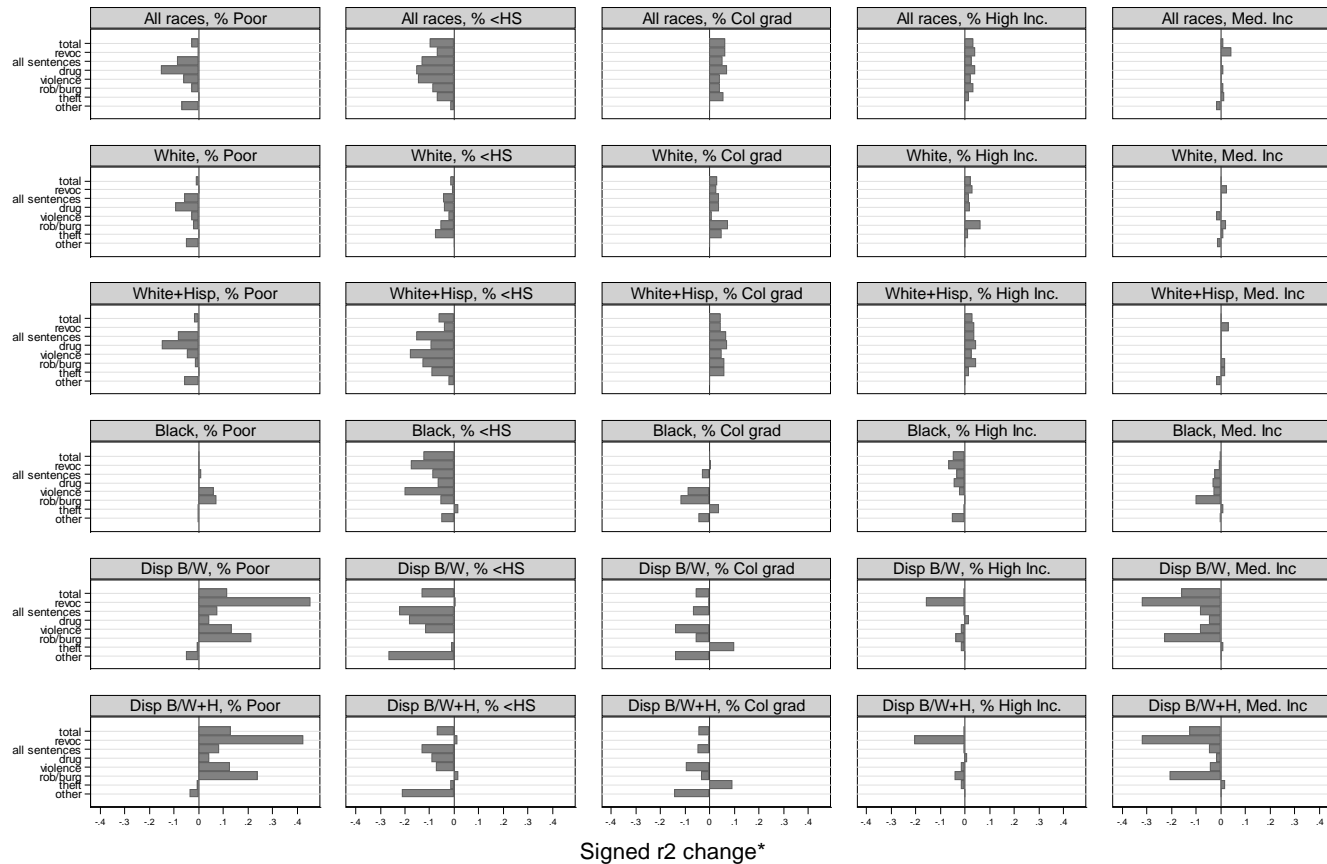
Signed R2 difference for regression of change from 1988-1992 to 1998-2001 in social control measures on time 1 socio-economic factors on prison admissions, non-metro



Each sub-graph is within indicated racial group
 *Difference in R2 after controls for racial composition and urbanity times sign of effect coefficient

FIGURE 22. EFFECT OF BASELINE LEVEL OF ECONOMIC AND EDUCATIONAL FACTORS ON CHANGE IN PRISON ADMISSION RATES IN NON-METROPOLITAN AREAS, BY RACE

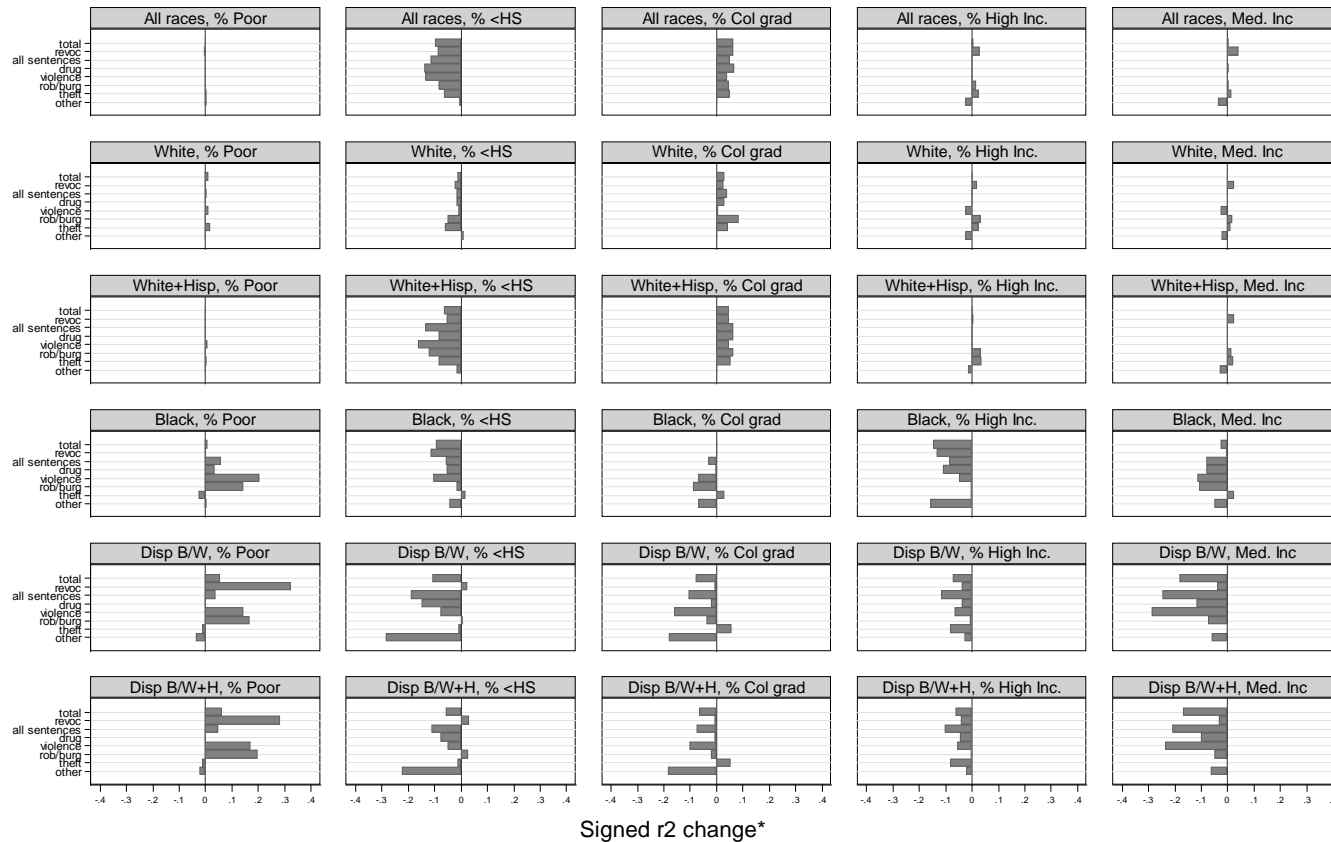
Signed R2 difference for regression of change between 1988-1992 and 1998-2001 in prison admission rates on change in socio-economic factors, non-metro



Each sub-graph is within indicated racial group
 *Difference in R2 after controls for racial composition and urbanity times sign of effect coefficient

FIGURE 23. EFFECT OF CHANGE IN ECONOMIC AND EDUCATIONAL FACTORS ON CHANGE IN PRISON ADMISSION RATES IN NON-METROPOLITAN AREAS, BY RACE

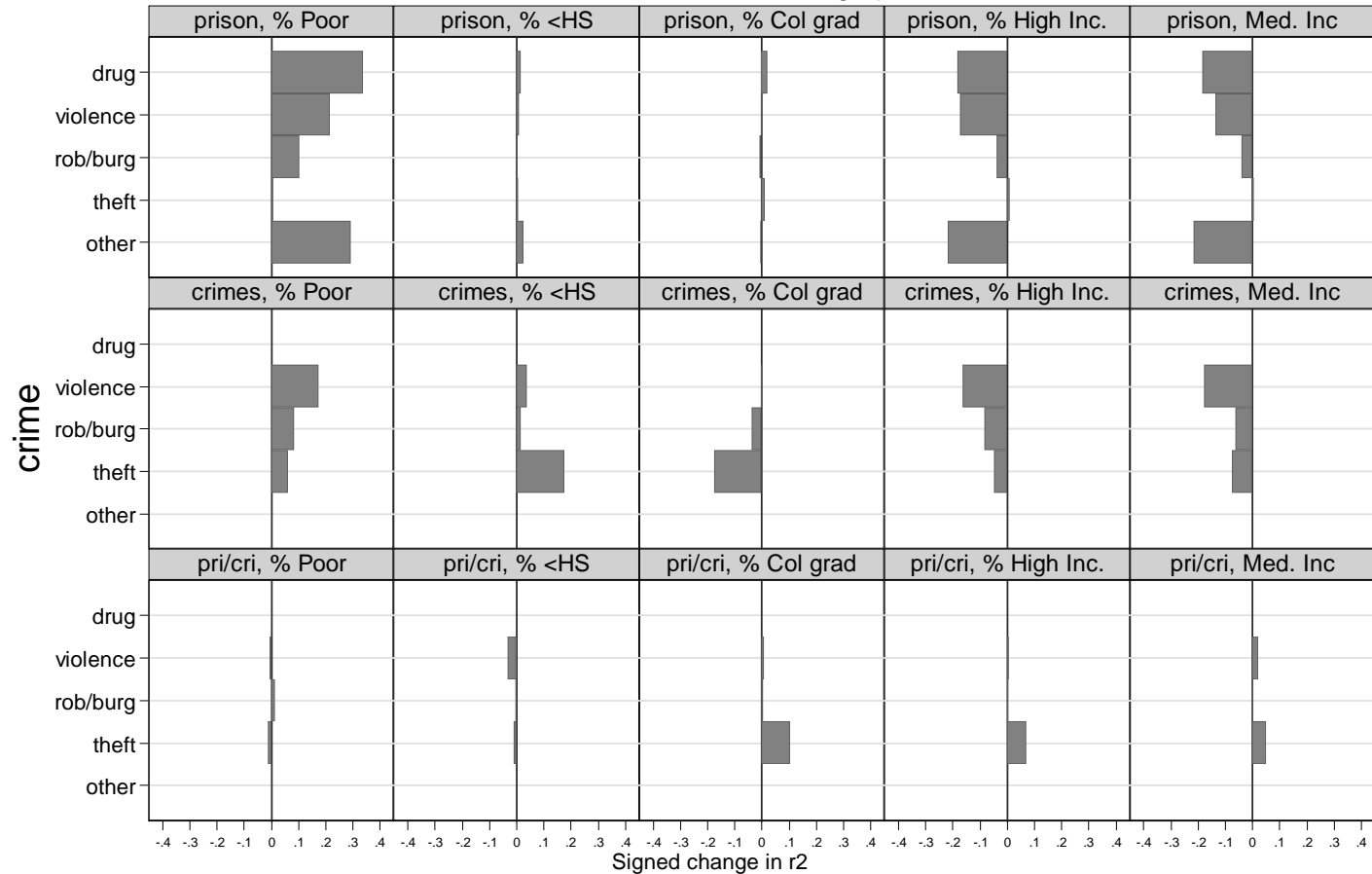
Signed R2 difference for regression of change between 1988-1992 and 1998-2001 in prison admission rates on change in socio-economic factors, non-metro



Each sub-graph is within indicated racial group
 *R2 difference after control for % Black & Hispanic and log Black population, urbanity and lag independent variable.
 Multiplied by sign of regression coefficient

FIGURE 24. EFFECT OF CHANGE IN ECONOMIC AND EDUCATIONAL FACTORS ON CHANGE IN PRISON ADMISSION RATES IN NON-METROPOLITAN AREAS , BY RACE (CONTROL FOR BASELINE)

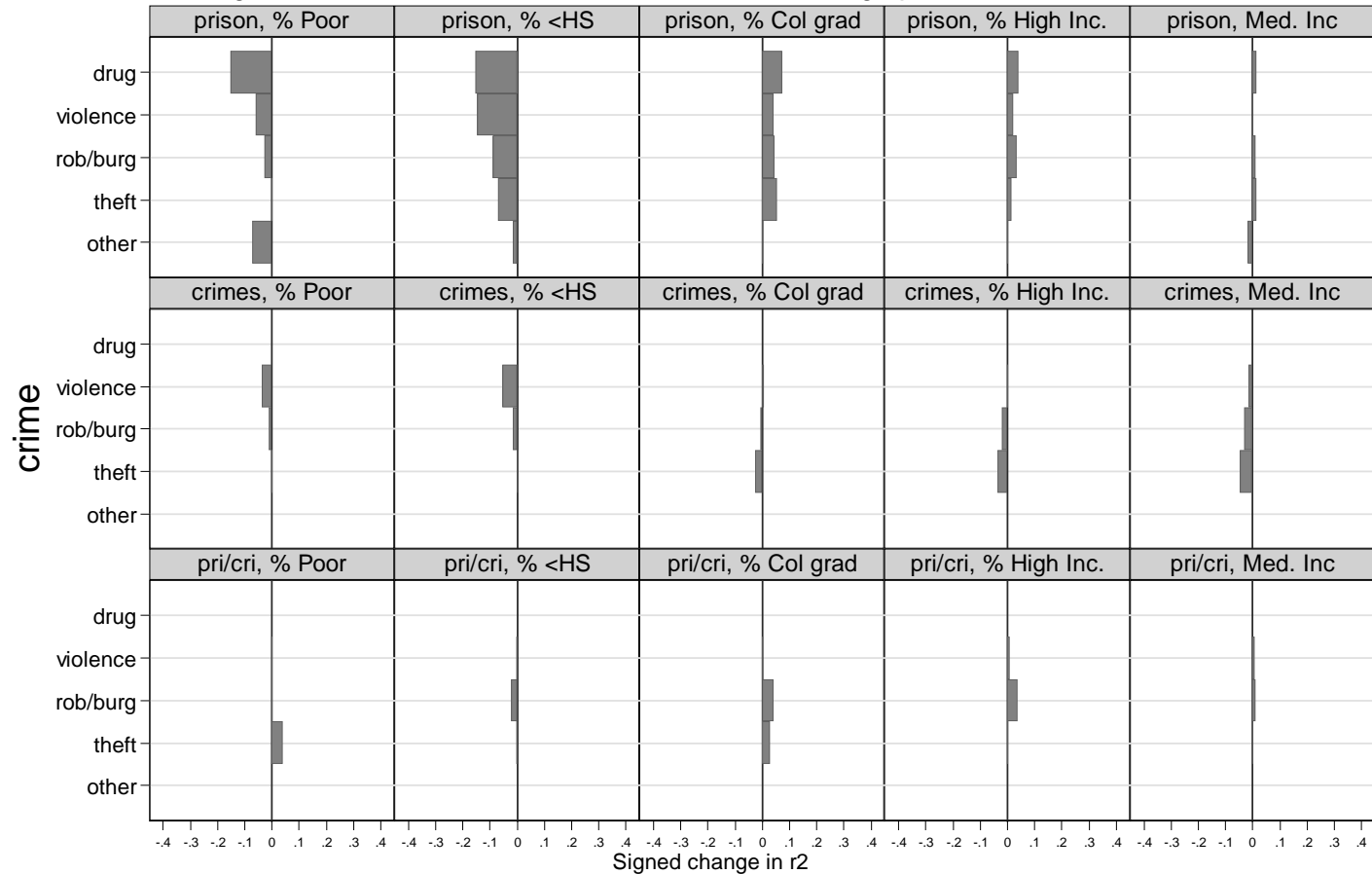
Signed R2 difference for regression of change from 1988-1992 to 1998-2001 in all races prison admission rate on time 1 socio-economic factors after control for demographic variables, non-metro areas



R2 difference after control for % Black & Hispanic and log Black population; signed by sign of poverty coefficient

FIGURE 25. EFFECT OF BASELINE LEVEL OF ECONOMIC AND EDUCATIONAL FACTORS ON CHANGE IN SOCIAL CONTROL RATES IN NON-METROPOLITAN AREAS, ALL RACES

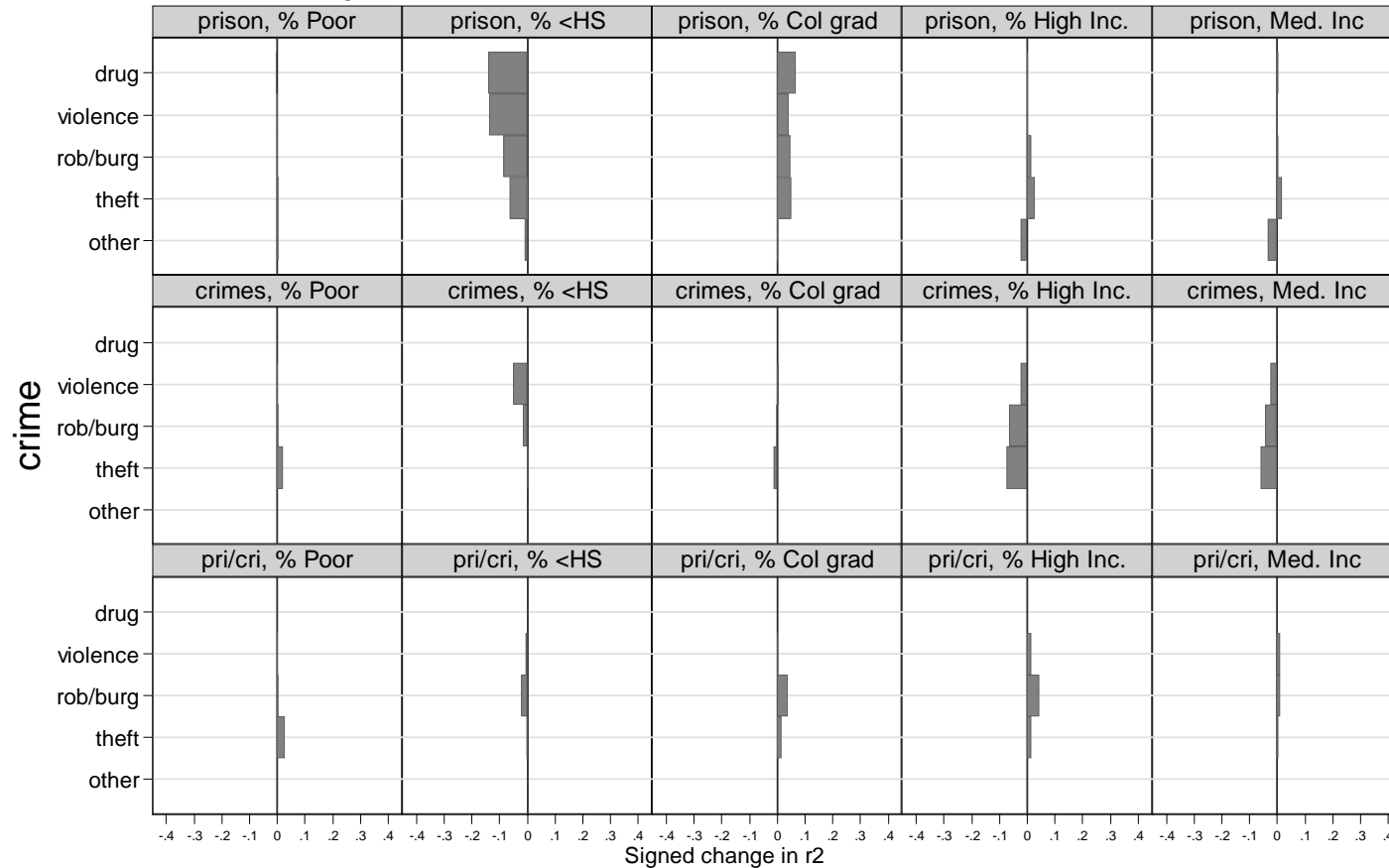
Signed R2 difference for regression of change 1988-1992 to 1998-2001 in all races social control measures on change in socio-economic factors after control for demographic variables, non-metro areas



R2 difference after control for % Black & Hispanic and log Black population times sign of regression coefficient

FIGURE 26. EFFECT OF CHANGE IN ECONOMIC AND EDUCATIONAL FACTORS ON CHANGE IN SOCIAL CONTROL RATES IN NON-METROPOLITAN AREAS, ALL RACES

Signed R2 difference for regression of change 1988-1992 to 1998-2001 in all races social control measures on change in economic & educational factors after controls , non-metro areas



R2 difference after control for % Black & Hispanic and log Black population, urbanity and lag independent variable. Multiplied by sign of regression coefficient

FIGURE 27. EFFECT OF CHANGE IN ECONOMIC AND EDUCATIONAL FACTORS ON CHANGE IN SOCIAL CONTROL RATES IN NON-METROPOLITAN AREAS, ALL RACES (CONTROL FOR BASELINE)

Notes

¹ I performed a similar exercise using data on fathers from the Fragile Families project. Their constructed “ever been incarcerated” measure can include something as short as an overnight stay in jail as well as a prison term, and their sample represents low income mothers who gave birth in public hospitals in major cities. The sample is disproportionately Black and low income. The fathers are those for whom data was provided at some point. The racial disparities are much lower in this sample than in the population at large or in Western’s data, ranging from 1.1 to 2.1. Nevertheless, as in other data, the racial disparity is higher at higher educational levels and lowest for high school drop outs.

² For the national trends, the smoothing algorithm was implemented with the Stata command: `tssmooth nl `r'`v's=`r'`v', smoother(5)`, where `r'`v' is a particular variable v for race r, and the `tssmooth` [time series smooth] command was implemented with the `no` [nonlinear] filter and a median smoother of span 5.

³ Supplemental graphs can be provided on the web.