

The Impact of Perceived Race Discrimination in the Labor Market on the
Criminal Activity of African American Youth.

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Abstract

We study the impact that perceived race discrimination in the labor market has on the subsequent criminal activity of young African Americans using data from the National Longitudinal Survey of Youth (1979). Results indicate that perceived discrimination in the labor market yields sizable increases in the incidence and intensity of property crimes among African American men. We find no evidence of an impact on violent crimes for men or on crime in general for women. These results are robust to different assumptions regarding respondent refusals to self report crime and other empirical specification issues.

Introduction

Racial discrimination may still be present in the labor market, housing, education and in the overall daily lives of African Americans (Darity and Mason, 1998). The prospect of diminished opportunities due to discrimination in the labor market may influence many aspects of behavior in youth, including participation in delinquent acts. This study examines the impact of perceived discrimination in the labor market on subsequent criminal activity of African American youth using National Longitudinal Survey of Youth (1979) (NLSY79) data.¹

Economists have traditionally viewed participation in property crime as a rational decision that weighs the expected costs and benefits of crime (Becker, 1968; Ehrlich, 1973; Block and Heineke, 1975). Participation in criminal activity, therefore, responds to incentives that affect the relative expected payoffs of criminal activity such as a change in an individual's opportunities in the legal labor market or the costs of criminal activity (such as odds of apprehension and severity of punishment). In this framework, perceived discrimination in the labor market would decrease the returns to legal employment, making crime relatively attractive.

Perceived discrimination may also have effects that reach beyond a direct effect of lower compensation in formal markets. Goldsmith et al. (2004), for instance, extend the classical model of labor market behavior to account for Festinger's (1957) theory of cognitive dissonance whereby perceived discrimination in job search induces an unbalanced psychological state. Individuals then respond by adjusting expectations and

¹ Members of other races and ethnicities, such as Hispanics, may also face labor market discrimination, but their perceptions of the nature of discriminatory acts are complicated by how they perceive their racial/ethnic identity. These perceptions vary widely among Hispanics (reference).

aspirations in order to restore psychological balance. One such adjustment may be to develop a distaste for participation in formal labor markets. Theories in psychology also associate perceived racial discrimination with psychosocial problems such as depressive symptoms and lower self-esteem (see Britt, et al. 2007 for a review). These psychosocial problems may make youth who feel discriminated against more likely to exhibit delinquent behaviors (Agnew, 1992). Simons et al. (2003), McCord and Ensminger (1997, 2002) Caldwell et al. (2004), for instance, find empirical evidence that perceived discrimination is associated with increased violent behavior among African American children and adolescents.

Thus far, however, most research has focused on general occurrences of racial discrimination and its impact on violent behaviors. Perceived discrimination in the labor market may differ from that in other social settings in terms of both the incentives and the psychosocial problems it generates. An analysis of the impact of perceived discrimination on property crime is also absent. The current study departs from the literature in several important aspects. First, it focuses on perceived discrimination in the labor market. Second, it distinguishes the effect of perceived labor market discrimination on property crimes (crimes only motivated by profit) and violent crimes (crimes not directly motivated by profit). Third, we generate measures of the intensity of criminal activity that account for both the frequency and severity of crimes, and estimate the impact of perceived discrimination on both the incidence and intensity of criminal activity. Lastly, we estimate selection models to account for potentially non-random individual refusals to answer the crime survey, taking advantage of data on the employees who conducted the NLSY79 surveys.

These estimates are provided in the rest of the paper as follows: Section 2 presents the data, measures of perceived discrimination and criminal activity and develops the empirical strategy. Section 3 presents the results, section 4 provides a discussion and distills implications for policy and for further inquiry.

Data, Measures and Empirical Strategy

The primary data source for the current study is the National Longitudinal Survey of Youth 1979 (NLSY79), a nationally representative sample of 12,686 respondents who were between the ages of 14-22 when first interviewed in 1979. The primary interviews were administered annually and in-person until 1994. Since then, interviews have been conducted biannually, and by phone or through short surveys. Family, individual and community characteristics, as well as measures of cognitive ability are available for most youth. Additionally, the 1980 survey round collected self-reported measures of criminal activity committed during the 12 months preceding the 1980 interview, as well as information on non-traffic related interactions with the police, criminal charges, and school-related disciplinary action taken against the youth over their lifetimes. Respondents who were 16 years of age or older were also asked whether racial discrimination has limited their employment opportunities in the 1979 interview.

Of the 3174 African American youth present in the NLSY 79 sample, we use the 2065 observations (consisting of 999 male and 1066 female respondents) who have completed both the 1979 and the 1980 surveys and were 16 years of age or older in 1979 (and were thus administered the discrimination question).

Perceived discrimination: Measures and Causes

There are three important aspects of the perceived discrimination measure that warrant discussion: the appropriateness of the survey question, a theoretical model for how respondents answer, and possible sources of measurement error. First, perceptions of race discrimination in the labor market are measured by an indicator that equals one if the question: “Has race discrimination presented problems in getting a better job?” was answered in the affirmative in 1979 and 0 otherwise. The phrasing of the question is appropriate because labor market discrimination, if encountered, is primarily observed in the form of exclusion from good jobs, rather than lower pay for minorities who hold similar jobs to whites (Higgs 1977). Second, we hypothesize that individuals observe incidents in the job market that they may suspect to be racially motivated and, based on these experiences, form a subjective probability that that they were discriminated against. They will then answer the survey question in the affirmative if the subjective probability is higher than some unobserved individual specific threshold. Thus, individual and social factors are expected to affect not only the underlying experiences, but also the threshold against which these experiences are translated into a yes/no answer. For instance, individuals with a low threshold may respond ‘yes’ at the mere suspicion of racial discrimination while others may not respond ‘yes’ unless they are almost certain that a discriminatory act has occurred. Furthermore, the threshold may also depend on the characteristics of the person who is asking the question.

To assess the relative importance of labor market experiences on the answer, as opposed to factors that surround the discussion of discrimination, we estimate probit models that relate the answer to the discrimination question with numerous variables. These variables reflect individual and familial attributes, attributes of the geographic

location of respondents and the race of the NLSY interviewer who asked the discrimination question. If the answer to the discrimination question reflects true perceptions we would expect factors correlated with underlying labor market experiences to explain the answers but not interviewer characteristics. If interviewer characteristics are an important predictor, then significant measurement error could exist as individuals with otherwise similar attributes would change their answer depending on who is asking the question.

Measuring criminal activity

As noted, the impact of perceived discrimination on criminal activity is considered separately for crimes that are motivated by profit, and those that are not. We consider 3 types of criminal acts in this study: 1-Major property crimes are defined as crimes that are motivated by the prospect of substantial personal gain and are in themselves non-violent. Among the acts that are self reported in the NLSY, these include selling hard drugs and stealing large amounts (in excess of \$50) (see Levitt and Lochner 2001). Major property crimes can potentially be thought of as a ‘criminal career’ in that they can potentially provide all or most of one’s income. 2-Minor property crimes involve selling marihuana, shoplifting and stealing amounts smaller than \$50. 3-Violent crimes include seriously threatening to hit, or actually hitting someone and attacking another with the intent to injure or kill. A finding that perceived discrimination in the labor market has a larger effect on profit motivated crimes than violent crimes, would provide evidence in favor of the economic explanation for the relationship between perceived discrimination and criminal behavior. Finding that perceived discrimination in

the labor market has a large affect on violent crime would lend support to theories that view psychosocial problems induced by discrimination as a cause of criminal behavior.

Incidence vs. Intensity

The incidence of criminal acts is measured by indicators that equal 1 if at least one of the crimes in each crime group was reported to have occurred and 0 otherwise. These measures, however, do not use the available information on the frequency of occurrence and the type of crime committed. In this study, for each respondent and for each group of crimes, we measure the intensity of criminal activity as:

$$(1) I = \sum_k S_k P_k N_k$$

Where S_k , P_k and N_k are the average share of offenders convicted in all U.S. federal courts that receive jail time, the average penalty in years of prison if the offender goes to jail and the number of times that crime k was reported to have occurred in 1980 by the NLSY respondent, respectively. $S_k P_k$ can be thought of as a weight that reflects the severity of a criminal act from society's stand point. The weights were obtained from (Blumstein and Cohen, 1980), a study that reported actual average incarceration rates and average penalties among successfully prosecuted offenders, as well as the public opinion on what those penalties should be.² Overall, the index of the intensity of criminal activity can be interpreted as the number of years of jail that the person would serve if they were convicted and received the average penalty for each crime committed during 1980.

² The authors find that actual penalties are statistically no different then the average penalty assigned by the public opinion for a wide variety of offenses.

Appropriate binary and censored dependent variable models are then used to examine the impact of perceived discrimination on both the incidence and the intensity of crime.

Self Reported Criminal Activity

The information on crimes used in this study is self-reported and may be subject to untruthful answers and omissions.³ In the NLSY, a disproportionate share of respondents refused to answer or provided invalid responses to the questions regarding criminal acts. These missing answers are likely non random and using only the subsample with valid answers could bias statistical inference. In fact, Lochner (1999) finds that NLSY 79 respondents who do not answer the criminal activity questions are more likely to be incarcerated in the future than the median individual with positive earnings from criminal activity, and suggests that treating individuals with missing answers as criminals may be better than dropping them from the sample. To assess the potential impact of missing answers on the analysis, we estimate three different specifications for each crime category. Under the first specification we exclude individuals with missing answers from the sample, under the second missing answers are counted as affirmative answers and the third specification treats missing answers as potentially non random sample attrition and estimates multivariate models with Heckman-type corrections for sample selection. We assume there exists an underlying relationship described by:

$$(2) c^*_j = x_j \mathbf{b} + d_j \mathbf{g} + e_{1j}$$

But we can only observe the discrete indicator

³ Some studies use actual records of arrests instead of self-reported crimes. This practice, however, draws a non random subsample of the population of individuals who committed crimes, those who got caught. If criminals who got caught are systematically different from those who don't using convictions as a measure of crime may bias statistical inference.

$$(3) \begin{aligned} c_j &= 1 \text{ if } c_j^* > 0 \\ c_j &= 0 \text{ if } c_j^* \leq 0 \end{aligned}$$

and c_j is only observed if

$$(4) R_j = (z_j d + d_j a + e_{2j} > 0)$$

Where c^* is a continuous latent index of criminal activity, R is an indicator of a valid response, x and z are vectors of observed covariates, d is the discrimination indicator, and b , g , a and d are parameter vectors. e_1 and e_2 are random errors that jointly approximate a normal distribution.

The empirical model used for purposes of examining the impact of perceived discrimination on the intensity of criminal activity is derived from the same underlying latent structure, but now the observed dependent variable is:

$$(5) I_j = c_j^* \text{ if } c_j^* > 0 \text{ and } I_j = 0 \text{ otherwise}$$

The study controls for a multitude of individual, family and community characteristics that could potentially confound the relationship between perceived discrimination and criminal activity. These variables include education of the oldest sibling, an indicator of presence of an older sibling, as well as total number of siblings to account for fraternal influences. In addition, total number of years of education of the respondent's mother and an indicator of the presence of a working mother in the household when the respondent was 14 years of age are added. Indicators of the labor market status of the male parental figure as well as absence of a male figure in the household at age 14 are also included to account for familial circumstances. An indicator of whether an adult present in the household received newspapers when the respondent was 14 years of age is included to proxy for present adult's literacy. Individual

characteristics include measures of cognitive ability and the respondent's age. Indicators of residence in a rural area and residence in the south are added to account for potentially unique circumstances associated with living in such areas, as are the county-level unemployment rate and the rate of crime known to police to account for community economic and criminal opportunities. Because we use observational data, there is the additional concern that there may be other confounders that are unobserved, and are thus omitted. If such unobserved effects existed and were correlated with both criminal tendencies and perceived discrimination, the above models would produce a biased estimate of the effect of perceived discrimination on crime. Such causality concerns are addressed in this study by estimating additional specifications of the multivariate models that include controls for delinquent behaviors prior to 1979. The number of times the respondent was stopped by the police for reasons not related to traffic violations, the number of times the respondent was charged with a crime, and indicators of suspensions or expulsions from school prior to 1979 are included. These controls proxy for unobserved individual characteristics that are correlated with criminal tendencies.⁴ Finally, in the models that account for sample attrition, a dummy variable to indicate that the interviewer who administered the 1980 survey no longer worked for the National Opinion Research Center's (NORC) by the end of 1980 was added to the selection equations, but not the criminal activity equations. Being interviewed by an individual who was subsequently terminated is strongly correlated with missing answers, but is uncorrelated with one's criminal tendencies. A full list of study variables as well as means and standard errors for the sample are presented by gender in table 1.

⁴ Estimating the impact of discrimination using an instrumental variable approach to account for potential endogeneity of the discrimination dummy would have been a desirable supplement to the current estimates, but we were unable to identify credible instruments.

For each crime group about 3-4 percent of all respondents provide invalid responses to the criminal activity questions. For men invalid responses are equal to about one third of all men who reported a major property crime. For women, invalid responses are equal to about 85 percent of those who report a major property crime. So sample attrition could be of substantial consequence. Crime rates are, as expected, higher among men in all crime categories, while claims of perceived discrimination are rather similar across gender groups with 17.3 percent of all black men and 18.6 percent of all black women answering the discrimination question in the affirmative.

Results

We first turn to the parameter estimates of the causes of perceived discrimination. Table 3 presents marginal effects and standard errors from the perceived discrimination model for each gender group. For men, residence in the south, age and number of times charged with a crime show statistically significant positive associations with perceived discrimination. For women, cognitive ability is negatively associated with perceptions of discrimination while absence of a father figure, age and being stopped by the police increase such perceptions. It is worth noting that the best predictor of perceived discrimination for both gender groups is age. The positive coefficient likely indicates that more years in the labor market increase the chance of unpleasant incidents that can be interpreted as racially motivated. Also, men living in the south may have faced more racially motivated incidents in the workplace, *ceteris paribus*. Absence of a father figure among women could proxy for emotional or stress factors, or perhaps, even after accounting for age, youth with missing father figures need to spend more time in the labor market to support their households. We also point out that the race of the

interviewer appears to have no association with the answer to the discrimination question for either gender group. Therefore the answer to the discrimination question is primarily based on labor market-related experiences and is not sensitive to social circumstances and survey administration. In other words, a respondent's answer does not depend on who is asking the question.

Impact of Perceived Discrimination on Crime

Table 3 presents parameter estimates of the impact of perceived discrimination on major property crime for men. The parameter estimates associated with perceived discrimination are positive and statistically significant under all specifications. Model 3.1 presents marginal effects computed at the sample mean from a single equation probit whereby respondents with invalid answers were dropped from the sample. These results indicate that African American men who believe racial discrimination has reduced their employment opportunities have a 5.2 ($p=0.1$) percentage point higher probability of committing a major property crime in any given year, after controlling for personal, familial and community attributes, past criminal activity and deviant behaviors at school. If missing answers are accounted for as if they were crimes (Model 3.2), the estimated impact is higher at 10.0 ($p=0.05$) percentage points. This is essentially the impact of perceived discrimination on the probability that the respondent did not deny (either by reporting a crime or refusing to answer the question) having committed a major property crime in 1980. Estimates from the probit models that treat missing answers as sample attrition (Model 3.3) show that men who felt discriminated against had a higher probability of reporting a crime and a lower probability of providing a valid answer to the criminal activity questions ($p=0.05$). Marginal effects indicate that those who felt

discriminated have a 6.7 ($p=0.05$) percentage point lower probability of: 1- providing a valid answer to the discrimination question and 2-reporting no crime in 1980.⁵

The estimates from Model 3.3, imply that respondents who felt that discrimination hindered them from getting a better job equated a better job with a 37.2% higher wage rate.⁶

The parameter estimate from the single tobit intensity equation (Model 3.4) indicates that perceptions of discrimination yield additional criminal activity that is punishable by an expected 16.8 ($p=0.05$) years in jail. The estimate from the tobit with selection (Model 3.5) is slightly larger at 18.16 ($p=0.05$) years.

Table 4 presents the parameter estimates associated with perceived discrimination for minor property crimes among men. All parameter estimates have the expected signs and somewhat smaller magnitudes relative to the respective estimates on the major property crime equations, but most estimates are not statistically significant by conventional standards. The marginal effect (and parameter estimate) that measures the impact of perceived discrimination on the probability that one does not deny the occurrence of a minor property crime (Model 4.2) is statistically significant ($p=0.1$). This parameter estimate implies a 7.3 percentage point higher probability of committing a minor property crime for African American men who believe they were discriminated against in the labor market.

Table 5 presents parameter estimates of the impact of perceived discrimination on violent crimes. We find that all parameter estimates are statistically not different from zero. This

⁵ The marginal effect is computed as $ME=[P(R=1 \text{ and } C=0)|_{d=1}]-[P(R=1 \text{ and } C=0)|_{d=0}]$

⁶ To compute this figure we use the estimates of Grogger (1998) who found that, in 1980, a 10% increase in wages was associated with a 1.8% reduction in the probability of committing a property crime.

study finds no evidence that perceived discrimination in the labor market has any impact on the incidence or intensity of violent crimes for African American men.

The results for African American women are not presented here, but all parameter estimates associated with perceived discrimination are statistically insignificant for all crime categories.

Robustness and Exploratory Analysis

Past criminal acts and disciplinary action in school are strong predictors of each type of crime. In addition, excluding past criminal acts and incidence of disciplinary actions at school from the equations generally results in higher estimated impact of perceived discrimination on the incidence and intensity of property crime. The inclusion of past criminal acts is thus likely a good proxy for factors that are positively associated with both criminal tendencies and perceived discrimination, and that are not directly observable.

Having been interviewed by an employee that was no longer employed by the NORC in the next year has a negative impact ($p=0.05$) on the probability of providing a valid answer to the criminal activity questions under all specifications for all crime categories and both gender groups, so the instrument appears to work well.

In addition, parameter estimates of the impact of perceived discrimination are not sensitive to the inclusion of potentially endogenous variables such as respondent's education, the socio economic prestige index of the occupation that the youth hopes to obtain as an adult, an index used to measure the respondent's knowledge of the world of

work, their willingness to work a bad job for a bad pay, their willingness to work a bad job for a good pay and the Rotter scale that measures the locus of control.⁷

Discussion

In this study we find evidence that perceived racial discrimination in the labor market leads to higher incidence and intensity of major property crime among African American men. We also find evidence of a similar effect of perceived discrimination on minor property crime, but these results are to be interpreted with caution, given the imprecision of the estimated effects. Perceived discrimination appears to have no impact on violent crimes for African American men or on crime in general for women. Because of the lack of impact on violent crimes, we conclude that perceived discrimination generates higher crime through altering market incentives in a way that makes profit seeking through crime attractive relative to labor markets. Continued support for programs and policies that reduce actual discrimination is thus likely to have an impact on the crime participation choices of young African American men.

In addition, we find perceptions of race discrimination to be associated with factors that are expected to increase the number of unpleasant incidents in the work place that may appear racially motivated, therefore educational programs that reduce racial friction or decrease racial interpretation of unpleasant situations in work environments may also have an impact on property crime.

We find that perceived discrimination can be a strong indicator of actual discriminatory acts, and it can have sizable effects on important decisions of youth. Yet most nationally representative datasets do not contain measures of perceived discrimination despite the fact that numerous complex and well-established measures exist in the psychology

⁷ Full parameter estimates for each model are not presented here but are available from the authors.

literature. Also, examinations of the impact of perceived discrimination on other relevant choices such as schooling and employment are very rare, perhaps reflecting the lack of data that is amenable for such analysis.

Table 1. Descriptive Statistics

Variable	Men		Women	
	Mean	Std. Dev.	Mean	Std. Dev.
Minor Property Crime (index)	2.540	8.294	0.923	4.487
Major Property Crime (index)	1.655	14.582	0.523	9.729
Violent Crime (index)	8.058	26.759	3.539	14.408
Major Property Crime (1/0)	0.113	0.316	0.033	0.178
Minor Property Crime (1/0)	0.413	0.493	0.261	0.439
Violent Crime (1/0)	0.477	0.500	0.321	0.467
Answered Major Property Crime Question	0.969	0.173	0.972	0.165
Answered Minor Property Crime Question	0.970	0.171	0.972	0.165
Answered Violent Crime Question	0.966	0.181	0.970	0.171
Discrimination	0.173	0.379	0.186	0.389
Private school	0.027	0.162	0.033	0.178
AFQT	23.097	22.695	23.744	20.348
AFQT Missing	0.032	0.176	0.018	0.132
Mother's education	10.797	2.543	10.655	2.659
Mother worked	0.600	0.490	0.595	0.491
Male not Working	0.073	0.260	0.068	0.251
Male Missing	0.301	0.459	0.319	0.466
Received Newspapers	0.665	0.472	0.644	0.479
Non Metropolitan County	0.170	0.376	0.203	0.402
South	0.609	0.488	0.630	0.483
Age	18.272	1.748	18.433	1.751
Education of oldest sibling	12.191	2.109	12.092	1.940
Number of Siblings	4.739	3.041	4.816	3.107
Has Older Sibling	0.784	0.412	0.765	0.424
Crime rate (county)	5.614	3.720	5.606	3.476
Unemployment rate (county)	4.448	1.671	4.522	1.806
Times stopped by police	1.082	5.420	0.061	0.361
Times charged with a crime	0.271	1.195	0.035	0.338
Ever suspended from school	0.483	0.500	0.301	0.459
Ever expelled from school	0.126	0.332	0.047	0.212
Black Interviewer	0.296	0.457	0.306	0.461
Interviewer terminated after 1980	0.052	0.222	0.057	0.232
N	999		1066	

Table 2 Determinants of Perceived Discrimination

	Men		Women	
	ME	SE	ME	SE
Private School	-0.023	0.069	0.125	0.082
AFQT	0.000	0.001	-0.001	0.001 **
AFQT Missing	0.016	0.069	-0.046	0.072
Mother's education	0.001	0.004	0.005	0.004
Mother worked	-0.035	0.025	-0.032	0.026
Male not Working	-0.036	0.043	0.041	0.054
Male Missing	0.036	0.028	0.086	0.028 **
Received Newspapers	-0.020	0.027	0.029	0.026
Non Metropolitan County	0.000	0.033	-0.025	0.031
South	0.047	0.024 *	-0.021	0.026
Age	0.030	0.007 **	0.025	0.007 **
Education of oldest sibling	0.007	0.005	0.005	0.004
Number of Siblings	-0.004	0.005	0.002	0.004
Has Older Sibling	0.007	0.072	-0.091	0.066
Crime rate (county)	0.001	0.003	0.004	0.003
Unemployment rate (county)	0.010	0.007	0.000	0.007
Times stopped by police	0.001	0.002	0.053	0.029 *
Times charged with a crime	0.016	0.010 *	0.014	0.033
Suspended	0.038	0.025	-0.018	0.026
Expelled	-0.037	0.034	-0.025	0.055
Black Interviewer	0.004	0.026	-0.032	0.025
Log likelihood	-438.11		-488.95	
N	999		1066	

Note: ME indicates marginal effects. ** and * denote statistical significance at the $p=0.05$ and $p=0.1$ respectively.

Table 3. Impact of Perceived Discrimination on Major Property Crimes (Men)

Model	(A) Past Included				(B) Past Excluded				
	Param	SE	L	N	Param	SE	L	N	
Incidence									
1	3.1--Probit--refusals excluded	0.052	0.030 *	-304.38	968	0.066	0.032 **	-325.12	968
2	3.2--Probit--refusals included	0.100	0.036 **	-398.36	999	0.115	0.036 **	-416.89	999
<i>3.3-- Probit with. Selection</i>									
3	Crime Equation	0.244	0.142 *	-418.61	999	0.288	0.137 **	-442.58	999
4	Selection Equation	-0.484	0.203 **			-0.431	0.195 **		
5	Marginal effects	-0.067	0.030 **			-0.082	0.032 **		
Severity									
6	3.4--Tobit	16.859	7.229 **	-756.63	968	19.851	7.278 **	-775.73	968
<i>3.6-- Tobit with Selection</i>									
7	Crime Equation	18.164	7.451 **	-871.14	999	18.205	7.182 **	-892.55	999
8	Selection Equation	-0.530	0.205 **			-0.431	0.196 **		

Notes: ** and * denote statistical significance at the p=0.05 and p=0.1 respectively. Rows 1 and 2 present the marginal effects of single equation probit models evaluated at the sample mean. Rows 3 and 4 present parameter estimates of the parameter estimates from the probit with selection and row 5 presents the marginal impact of discrimination on the probability that the question is answered and no crime was committed for the same model. Row 6 presents the parameter estimates from a single equation tobit and rows 7 and 8 are parameter estimates of the crime and the selection equation from the tobit with selection.

Table 4. Impact of Perceived Discrimination on Minor Property Crimes (Men)

Model	(A) Past Included				(B) Past Excluded				
	Param	SE	L	N	Param	SE	L	N	
Incidence									
1	4.1--Probit--refusals excluded	0.037	0.045	-609.05	969	0.057	0.044	-646.35	969
2	4.2--Probit--refusals included	0.073	0.044 *	-643.54	999	0.091	0.043 **	-673.91	999
<i>4.3--Probit with. Selection</i>									
3	Crime Equation	0.124	0.112	-718.87	999	0.168	0.108	-760.73	999
4	Selection Equation	-0.325	0.216			-0.299	0.205		
5	Marginal effects	-0.049	0.044			-0.066	0.043		
Severity									
6	4.4--Tobit	1.489	1.441	-1907.43	969	2.178	1.481	-1944.18	969
<i>4.5--Tobit with Selection</i>									
7	Crime Equation	1.695	1.452	-2017.68	999	2.271	1.488	-2058.99	999
8	Selection Equation	-0.355	0.216			-0.298	0.206		

Notes: ** and * denote statistical significance at the p=0.05 and p=0.1 respectively. Rows 1 and 2 present the marginal effects of single equation probit models evaluated at the sample mean. Rows 3 and 4 present parameter estimates of the parameter estimates from the probit with selection and row 5 presents the marginal impact of discrimination on the probability that the question is answered and no crime was committed for the same model. Row 6 presents the parameter estimates from a single equation tobit and rows 7 and 8 are parameter estimates of the crime and the selection equation from the tobit with selection.

Table 5. Violent Crimes (Men)

Model	(A) Past Included				(B) Past Excluded				
	Param	SE	L	N	Param	SE	L	N	
Incidence									
1	5.1--Probit--refusals excluded	-0.049	0.045	-638.44	965	-0.031	0.044	-656.54	965
2	5.2--Probit--refusals included	-0.014	0.044	-667.38	999	0.002	0.043	-683.32	999
<i>5.3--Probit with Selection</i>									
3	Crime Equation	-0.102	0.117	-763.10	999	-0.105	0.109	-785.99	999
4	Selection Equation	-0.359	0.206			-0.333	0.194		
5	Marginal effects	0.038	0.045			0.021	0.042		
Severity									
6	5.4--Tobit	-2.217	4.252	-2644.45	965	-0.709	4.262	-2658.73	965
<i>5.5--Tobit with Selection</i>									
7	Crime Equation	-1.803	4.274	-2768.98	999	-0.458	4.288	-2788.57	999
8	Selection Equation	-0.367	0.206			-0.307	0.195		

Notes: ** and * denote statistical significance at the $p=0.05$ and $p=0.1$ respectively. Rows 1 and 2 present the marginal effects of single equation probit models evaluated at the sample mean. Rows 3 and 4 present parameter estimates of the parameter estimates from the probit with selection and row 5 presents the marginal impact of discrimination on the probability that the question is answered and no crime was committed for the same model. Row 6 presents the parameter estimates from a single equation tobit and rows 7 and 8 are parameter estimates of the crime and the selection equation from the tobit with selection.

References

- Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology*, 30(47-88).
- Becker, Gary. (1968). "Crime and Punishment: An Economic Approach." 76(2) *Journal of Political Economy* 169–217
- Block, Michael K., and John M. Heineke. (1975). "A Labor Theoretic Analysis of the Criminal Choice." 65(3) *American Economic Review* 314–25.
- Blumstein Alfred and Jacqueline Cohen "Sentencing of Convicted Offenders: An Analysis of the Public's View" *Law & Society Review*, Vol. 14, No. 2, (Winter, 1980), pp. 223-261
- Britt, A. H., Valrie, C. R., Costes B. K., & Rowley, S. J. (2007). Perceived Racial Discrimination and Self-Esteem in African American Youth: Racial Socialization as a Protective Factor. *Journal of Research on Adolescence*, 17(4), 669-682.
- Caldwell, C. H., Kohn-Wood, L. P., Cone-Schmeelk, K. H., Chavous, T. M., & Zimmerman, M. A. (2004). Racial discrimination and racial identity as risk or protective factors for violent behaviors in African American young adults. *American Journal of Community Psychology*, 33(1-2), 91-105.
- Ehrlich, Isaac. (1973). "Participation in Legitimate Activities: A Theoretical and Empirical Investigation." 81(3) *Journal of Political Economy* 521–65
- Darity, W. A., & Mason, P. L. (1998). Evidence on discrimination in employment: Codes of color, codes of gender. *Journal of Economic Perspectives*, 12(2), 63-90.
- Goldsmith, Arthur H., Stanley Sedo, William Darity Jr., and Darrick Hamilton, "The labor supply consequences of perceptions of employer discrimination during search and on-the-job: Integrating neoclassical theory and cognitive dissonance" *Journal of Economic Psychology* 25 (2004) 15–39
- Grogger, Jeff., 1998. "Market Wages and Youth Crime," *Journal of Labor Economics*, 16(4), 756-791
- Higgs, Robert., 1977. "Firm-Specific Evidence on Racial Wage Differentials and Workforce segregation," *American Economic Review*, 67. 236-45.
- Levitt, S. D., & Lochner, L. (2001). The determinants of juvenile crime In J. Gruber (Ed.), *Risky behavior of youth*. Chicago, IL: University of Chicago Press.
- Lochner, L., (1999). "Education, Work, and Crime: Theory and Evidence," RCER Working Papers 465, University of Rochester - Center for Economic Research (RCER).
- McCord, J., & Ensminger, M. E. (1997). Multiple risks and comorbidity in an African

American population. *Criminal Behavior and Mental Health*, 7, 339-352.

McCord, J., & Ensminger, M. E. (2002). *Racial discrimination and violence: A longitudinal perspective*. New York: Cambridge University Press.

Sellers, R. M., & Shelton, N. J. (2003). The Role of Racial Identity in Perceived Racial Discrimination. *Journal of Personality and Social Psychology*, 84(5), 1079-1092.

Simons, R. L., Chen, Y. F., Stewart, E. A., & Brody, G. H. (2003). Incidents of discrimination and risk for delinquency: A longitudinal test of strain theory with an African American sample. *Justice Quarterly*, 20(4), 827-854.