
From Dark to Light

Skin Color and Wages Among African-Americans

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ABSTRACT

This paper develops and tests a theory, referred to as “preference for whiteness,” which predicts that the interracial (white-black) and intraracial wage gap widens as the skin shade of the black worker darkens. Using data drawn from the Multi City Study of Urban Inequality and the National Survey of Black Americans, we report evidence largely consistent with the theory. Moreover, we decompose the estimated interracial and intraracial wage gaps, and find that favorable treatment of lighter-skinned workers is a major source of interracial and intraracial wage differences as predicted by the theory.

I. Introduction

Conventional wisdom in the social sciences holds that there is a fundamental difference in the construction and understanding of racial categories between most communities in Latin American countries and most communities in the United States of America. The standard claim has it that racial distinction is dictated primarily by phenotype or physical appearance in Latin America and is dictated

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primarily by genotype or ancestry in the United States (Rodriguez 1991 is representative).¹ However, recent research is subverting the sharpness of this alleged conceptual divide (Keith and Herring 1991; Seltzer and Smith 1991; Falcon 1995; Twine 1998; Hill 2000; Darity, Hamilton and Dietrich 2002; and Darity, Mason, and Stewart 2006).

An extensive literature examines the influence of race on wages in the United States and the mechanisms through which race affects wages (see the surveys by Cain 1986; Altonji and Blank 1999). A distinguishing feature of this literature is a categorization of workers—as black or white—consistent with the conventional wisdom of U.S. racial categorization. This paper offers an alternative perspective, that the link between wages and race is more complex than the simple bivariate ranking with whites at the top. Rather we argue that the wage hierarchy is characterized by a more gradational ranking with whites at the top and dark-skinned blacks at the bottom.

We offer and test a theory suggesting that for blacks, as skin-shade lightens, wages rise. Thus, our theory predicts that the white-black wage gap is greater for darker-skinned blacks than for blacks with lighter skin. We estimate two sets of models, one based on a bivariate grouping of blacks and whites and a second set based on a grouping of whites and blacks disaggregated based on their skin shade. We refer to the first set of models as the *one drop* models, where “one drop” is used figuratively to connote individuals who appear to be racially black, and the second set as the *rainbow* models, where the rainbow metaphor is used to connote imagery of a range of categories based on skin shade.² We estimate the two sets of wage equations to document the link between skin shade and wages as well as the shortcoming of characterizing race as either black or white rather than on a continuum from light to dark.

We begin by constructing a hypothesis, which we refer to as a *preference for whiteness*, as an explanation for wage gaps based on skin shade. This hypothesis is founded on insights from social psychology (Tajfel and Turner 1986; Campbell 1965; Fisk and Ruscher 1993) and anthropology (Sumner 1906). The theory rests on three cornerstones: First, social categorization is a fundamental cognitive process leading to in-groups and out-groups, where out-groups are exposed to prejudicial attitudes and biased judgements and in-group members receive preferential treatment. Second, socialization patterns and the structure of rewards in the United States have led to *whiteness* as a defining attribute of the in-group; lighter skin can give an individual greater proximity to the benefits associated with whiteness, regardless of their racial classification. Third, in-group members are ascribed higher social status, which also leads to preferential treatment of workers possessing the characteristics of the in-group. Thus, preferential treatment of in-group characteristics is expected to foster higher wages for those blacks with lighter skin relative to those with darker skin because of their phenotypical proximity to the preferred white workers.

A strength of this study is that we use two separate, independently assembled data sets, the National Survey of Black Americans (NSBA 1979) and the Multi City Study

1. Phenotype entails the collective dimensions of a person's physical appearance including factors such as complexion, facial dimensions, and hair texture which generally are expected to be unrelated to an individual's productivity.

2. Rodriguez (1992) uses the rainbow metaphor in her description of Latino patterns of racial classification.

of Urban Inequality (MCSUI 1992), which categorize black respondents by their skin shade.³ Motivated by the theory of white preference, we test hypotheses that shed light on two questions. First, does the interracial (white-black) and intraracial wage gap widen as the skin shade of the black workers darkens? This question is answered by using multiple reduced-form specifications that control for a wide array of labor market indicators, as well as reduced-form specifications that address selection into the labor market and endogeneity concerns of skill acquisition and labor market rewards (see Neal and Johnson 1996). Second, are the factors that contribute to wages treated more favorably for workers with lighter skin shade? To answer this latter question, we compute wage decompositions and determine the amount of the wage gap that is due to differences in the rates of returns (coefficients) of labor market characteristics.

II. Preference for Whiteness and Wages

A. *In-Groups, Out-Groups, and Skin Shade*

Social psychologists believe that human categorization is a fundamental cognitive process. The general tendency of human beings to differentiate themselves according to group membership was documented early in the previous century in extensive anthropological observations compiled by Sumner (1906). Sumner coined the distinction between in-group and out-group and suggested that preference for in-groups over out-groups is a universal characteristic of social existence.

A convention has emerged in representing in-group and out-group status along the racial axis on a bivariate scale with white as the in-group and not white as the out-group (a convention based on the one drop rule). Because of strong and persistent evidence of comparatively preferential treatment of blacks with lighter complexions both by whites and blacks, we depart from this convention. We believe that patterns of socialization in the United States may be consistent with a gradational model of in-group and out-group with regard to phenotype. In this framework, lightness begets access to in-group privileges, rather than whiteness alone. It follows that, if having white skin shade is an attribute of the in-group, light-skinned blacks should receive greater societal rewards than dark-skinned blacks, because of their proximity to the more socially desired skin color of the in-group.

We recognize that there are many characteristics and traits besides skin color associated with the white in-group. Examples are diction, accents, mannerisms, hair texture, clothing, residence, naming practices, and the list continues. We use skin shade as the proxy for possessing in-group characteristics in part because this in-group feature is available in our data sets.

Moreover, skin shade is a salient feature that distinguishes minorities from members of the majority population in the United States. According to Hall (1995), many African-Americans have adopted the dominant culture's preference for lighter

3. We focus on males because sorting between the effects of race/skin color and *gender* requires a separate study.

skin.⁴ The motivation to pursue or value lightness is a response in part to the behavior of whites.⁵ Hall calls efforts by blacks to make their skin lighter through the use of “beauty” creams and folk preparations, to gain status, the “bleaching syndrome.”⁶

There is a considerable historical legacy that the skin shade of African Americans has exerted powerful and persistent influences on attitudes toward and treatment of black persons within both white and black communities (for recent reviews, see Neal and Wilson 1989; Gatewood 1988; Hughes and Hertel 1990; Okazawa-Rey, Robinson and Ward 1987). During the era of slavery, light-complexioned blacks, often the offspring of white slave owners and enslaved Africans, were given preferential treatment through assignment to housework while darker-skinned blacks were typically assigned to outdoor or hard-labor tasks (Keith and Herring 1991). Moreover, skin shade played a profound role in the acquisition of social status for black Americans following the abolition of slavery.⁷

Maddox and Gray (2002) report that both whites and blacks attribute more positive attributes and greater social status to lighter-skinned blacks. In addition, new studies are emerging that demonstrate a preference for whiteness among other ethnic groups. For example, Boza and Darity (forthcoming) using data drawn from the Latino National Political Survey (1989-90) find a majority of persons of either Mexican, Puerto Rican, or Cuban origin self identified as racially white—even if they were identified as darker-skinned by the interviewers.

B. In-Groups, Out-Groups, and Prejudice

Social Identity Theory (Tajfel and Turner 1979, 1986) is used by psychologists to explain why persons belonging to an in-group are prejudiced toward members of the out-group. In our context, where in-group status is related to skin shade, Social Identity Theory provides a basis for why both whites and blacks might treat lighter-complexioned blacks better than darker blacks.

Social Identity Theory asserts that people have a fundamental need for self-worth and self-esteem. An individual’s self-worth or self-esteem is enhanced by their group’s success and achievements—due to a perception of common fate. Thus, an individual’s outcomes are linked to their group’s outcomes. Therefore, positive in-group bias is expected because it can improve the standing of the in-group relative to the comparison group; it

4. Light skin tone has become a point of reference for the attractiveness of African American females (Okazawa-Rey, Robinson, and Ward 1987; Neal and Wilson 1989; Bond and Cash 1992). African American folk terms developed to describe variations in skin shade generally are complimentary of light-skinned color (Herskovits 1968) and include terms such as high yellow, ginger, crème, bronze, and café au lait.

5. W.E.B. DuBois (1903) in his “theory of double consciousness” argued that anyone in America whose skin shade did not approximate that of the dominant culture had an incentive to assume a passive social demeanor in order not to further offend, and to thus gain a greater degree of American assimilation.

6. There is international evidence of this preference for whiteness as well (New Vision 2001). Marketers of skin lightening lotions and creams in Africa, India, the Philippines, and Malaysia promote their products as offering a “fairer complexion.” Despite the health risks associated with the use of lightening lotions, in 2003 sales of skin lighteners were \$147.36 million in India (Sullivan 2003). Repeated use of lightening creams removes the skin’s melanin pigment, leads to skin that is thin, brittle, bruises easily, and is more vulnerable to sunburn and related cancers. Lightening creams promote discoloration and rashes leading to what Ugandan’s call the Pepsi-Mirinda effect—where part of the body is a fiery orange (like a Mirinda soda) and part of it (typically in the area of joints) is dark black-green in hue.

7. At the turn of the previous century, African Americans organized *blue vein* societies where a prerequisite for membership included skin tone lighter than a paper bag or light enough for visibility of blue veins.

contributes to self-worth. According to this theory the mere categorization of people into two groups, in-groups and out-groups, is sufficient to induce intergroup discrimination where in-group members discriminate against the out-group and out-group members discriminate against the in-group. We refer to this intergroup discrimination as the “categorization effect.” The outcomes of the categorization effect may be asymmetric given that one group may be endowed with greater resources and power than the other, leading to disproportionate effects of each group discriminating against the other—the in-group may be relatively more effective in discriminating against the out-group.

Tajfel and Turner (1979, 1986) extended their core thesis by suggesting that group status has an independent and powerful impact on intergroup behavior, which we refer to as the “status effect.” Tajfel and Turner argue that if low-status group members acknowledge the superiority of high-status group members on the status-related dimension of comparison (skin shade) then low-status group members will show out-group favoritism rather than own-group favoritism. In our context, if, for blacks, the status effect is stronger than the categorization effect, then darker-skinned blacks as well as whites will treat lighter-skinned blacks more favorably.⁸

Two decades of experimental research by psychologists reviewed by Brewer and Brown (1999) reveals that social identification with in-groups elicits liking, trust, and cooperation toward in-group members that are not extended to out-group members.⁹ Moreover, in bargaining games studied by social psychologists (Commins and Lockwood 1979; Turner 1978) and economists (Ball and Eckel 1998; Ball, Eckel, Grossman, and Zame 2001) participants were found to treat persons better if the other has higher status than their own. According to Ball et al. (2001), status carries with it privileges and expectations of entitlement to resources.

The theory we describe predicts that the impulse to categorize workers according to complexion and to confer status on those with lighter skin shade will lead to favorable treatment and assessment, and hence higher wages, relative to their darker-skinned counterparts. This gradational perspective on how race influences labor market outcomes raises an interesting question. How far along the skin-shade continuum does the financial benefit of *lightness* extend? Is it the case that the wages of light-complexioned blacks still fall short of white wages, but the interracial wage gap is less than the gap experienced by blacks with darker skin shade? Among black workers is there an intraracial wage gap based on skin shade? We turn next to a discussion of the data that will be used to explore these questions.

III. Data and Methodology

A. Data

Data from the National Survey of Black Americans (NSBA) and from the Multi City Study of Urban Inequality (MSCUI) are used in this study. The MSCUI is an

8. Evidence from Hagendoorn and Henki (1991), Sachdev and Bourhis (1987), Brown and Abrams (1986), and Van Knippenberg (1978) reveals that when status hierarchy is perceived as stable and legitimate, persons from both in-groups and out-groups evaluate in-group members more favorably.

9. Brewer and Brown (1999) report that people tend to rate their own group more positively than others, even when the groups are artificially constructed and even when they have little reason to expect differences between the groups.

interview-based survey of close to 9,000 households and 2,400 firms administered in the metropolitan areas of Los Angeles, Boston, Atlanta, and Detroit between 1992 and 1994.¹⁰ MCSUI respondents included whites, blacks, Hispanics, Asians, and persons coded as other. In conducting the Household Survey, from which we use data, attempts were made to race match, by assigning interviewers of a certain race or ethnicity to respondents of that same race/ethnicity. MCSUI and NSBA interviewers graded respondents on a salient phenotypical dimension, skin shade, using a Likert scale. Prior to conducting interviews, the orientation of MCSUI and NSBA interviewers included training to establish consistency in the coding of respondent skin shade. The NSBA interviewers used five categories (very dark, dark, medium, light, and very light) when coding skin shade, while three categories were used to describe the complexion of blacks who participated in the MCSUI survey. For analytical and sample size purposes, we collapsed the NSBA data into three categories: light (which includes very light and light), medium, and dark (containing very dark and dark), which conform to the MCSUI classification scheme.

We restrict the analysis to men aged 19–65 who were working, and who were not self-employed, when the MCSUI survey was conducted. Women and the elderly are excluded to minimize biases arising from selective labor force participation. We further restrict the MCSUI sample to blacks and whites to focus on the link between skin shade and black-white wage differences. Survey participants were asked to report their hourly wage. Persons who do not provide their wage are excluded from the subsample we analyze. In addition, workers who report an hourly wage below \$2 or above \$100 are considered outliers and are excluded. In the MCSUI data, persons with reported earnings in excess of \$100,000 are excluded as well. Moreover, we do not use data from Detroit since information from that metropolitan area was not collected on a number of variables contained in our study.

The MCSUI provides data on a rich array of socioeconomic and demographic factors, including information on a person's human capital, workplace characteristics if employed, the neighborhood where they reside at the time of the survey, and retrospective personal and family characteristics when the interviewee was a youth. We excluded persons from our sample if they did not report information on the full set of variables used in our most fully specified wage equation.¹¹ The MCSUI data we analyze (given the restrictions we impose) contains 948 observations, 513 whites, and 435 blacks, when we estimate our preferred model specifications. Of the 435 blacks in our sample, 12 percent (51) are light-skinned, 41 percent (177) were placed in the medium skin tone category, and 47 percent (207) were classified as having dark skin.

The average person in our sample is 37 years old and has completed 14.5 years of schooling; 15 percent of the sample earned a bachelors degree, and 60 percent of them are married. The typical worker in our sample has been with their current employer for more than six years. In our sample, a quarter of the people are union

10. All Detroit and Atlanta respondents were interviewed in 1992 and 1993 respectively, while participants residing in Boston and Los Angeles were interviewed in either 1993 or 1994.

11. A table that catalogues MCSUI observations lost for each restriction imposed, and a similar table for the NSBA data are available from the authors upon request.

members, 10 percent are employed part-time, 36 percent supervise others, and about 20 percent are public-sector employees.

1. Summary Statistics and Skin Shade

Table 1 reports summary statistics for whites and for blacks disaggregated by skin-shade group, for key variables used in our analysis. The data are reported in a series of panels that provide information on wages, human capital, and parent education; demographics, and workplace characteristics. Variable definitions are presented in Appendix Table 1.¹²

Mean hourly wages, reported in Panel A of Table 1, rise as skin tone lightens, moving from \$11.72 for dark-skinned blacks to \$13.23 for blacks with medium skin shade. Light-skinned blacks report hourly pay of \$14.72 and the average white respondent reports earning \$15.94 per hour. The table also reveals that the wages of whites were statistically significantly higher than light-skinned blacks, while the wages of dark-skinned blacks were statistically significantly lower. Inspection of Table 1 reveals that on most variables there are variations in mean values across the skin-shade groups for blacks. Light-skinned blacks typically have higher values on variables that are known to contribute to wages, and their profile is closer to that of whites than blacks with darker complexion. However, for most of the variables, the profile of light-skinned black male wage earners is not statistically distinguishable from their darker peers. The exceptions are that dark-skinned black males have fewer years of schooling, are more likely to drop out of high school, have more dependents, live in Boston, and live in neighborhoods with lower crime than light-skinned blacks, while medium-skinned blacks are statistically significantly more likely to live in Los Angeles and be raised by both parents than light-skinned blacks.

Casual inspection of the wage and characteristic data reported in Table 1 suggests that the higher wages earned by whites relative to light-skinned blacks, and among blacks by those with lighter-skinned blacks may be due to greater schooling and hence better productivity. However, the theory we advance proposes that skin shade may influence wages beyond its association with better levels of human capital. In subsequent sections we conduct a more rigorous and systematic examination of the link between skin shade and wages using regression analysis to determine whether the higher wages earned by lighter-skinned blacks is due solely to superior skills and attributes or if lighter complexion is rewarded after controlling for conventional wage determinants.

B. Methodology

We estimate reduced-form wage equations using ordinary least squares, which include indicators for race, and/or skin shade. This allows us to determine if interracial and intraracial wage gaps expand as skin-shade differences between groups widen,

12. A concern is whether our subsample of employed persons who meet our restrictions differs markedly from the subsample of comparable persons not working. Comparison of the means for the full range of variables reveals little difference between those comparable individuals who are not working and those employed.

Table 1

Summary Statistics for Selected Variables used in Econometric Analysis: Males, MCSU Data

| Variables | White (n=513) | Light Black (n=51) | Medium Black (n=177) | Dark Black (n=207) |
|---|-------------------|--------------------------|----------------------------|--------------------------|
| Panel A: Wages, Human Capital, and Parental Education | | | | |
| Hourly wage | 15.94* (7.73) | 14.42 (6.05) | 13.23 (6.64) | 11.72* (5.60) |
| Schooling | 14.64* (1.99) | 14.16 (1.97) | 13.98 (1.99) | 13.65** (2.33) |
| High school dropout | 0.03 (0.16) | 0.02 (0.15) | 0.06 (0.24) | 0.09*** (0.28) |
| High school | 0.36** (0.48) | 0.48 (0.50) | 0.57 (0.50) | 0.51 (0.50) |
| Community college | 0.15 (0.35) | 0.10 (0.30) | 0.10 (0.30) | 0.17 (0.37) |
| Attend college | 0.31* (0.46) | 0.36 (0.48) | 0.16 (0.37) | 0.15 (0.36) |
| College | 0.16** (0.37) | 0.04 (0.19) | 0.11 (0.31) | 0.09 (0.29) |
| Self-reported poor high school performance | 0.07 (0.26) | 0.13 (0.33) | 0.05 (0.21) | 0.07 (0.25) |
| Did not complete high school by age 19 | 0.15 (0.36) | 0.13 (0.35) | 0.14 (0.35) | 0.27* (0.45) |
| Tenure | 6.53 (7.68) | 8.23 (9.32) | 7.04 (7.09) | 3.73 (4.73) |
| Disability | 0.12 (0.33) | 0.09 (0.29) | 0.12 (0.32) | 0.17 (0.38) |
| Mother high school graduate | 0.77 (0.42) | 0.63 (0.49) | 0.69 (0.46) | 0.57 (0.50) |
| Father high school graduate | 0.72** (0.45) | 0.42 (0.50) | 0.53 (0.50) | 0.49 (0.50) |
| Both parents raised | 0.82*** (0.38) | 0.58 (0.50) | 0.71* (0.46) | 0.65 (0.48) |
| Panel B: Demographic Characteristics | | | | |
| Age | 37.64 (10.58) | 39.56 (11.42) | 35.42 (10.48) | 35.26 (8.96) |

(continued)

Table 1 (continued)

| Variables | White (n=513) | Light Black (n=51) | Medium Black (n=177) | Dark Black (n=207) |
|--|------------------|--------------------------|----------------------------|--------------------------|
| Married | 0.61 (0.49) | 0.62 (0.49) | 0.39 (0.49) | 0.62 (0.49) |
| Number of dependents | 0.60 (0.95) | 0.66 (1.03) | 0.52 (0.94) | 1.21* (1.44) |
| Foreign resident at 16 years of age | 0.03 (0.17) | 0.03 (0.16) | 0.27 (0.45) | 0.11*** (0.32) |
| Panel C: Workplace Features and Location | | | | |
| Union | 0.23 (0.42) | 0.23 (0.43) | 0.22 (0.41) | 0.38 (0.49) |
| Work part-time | 0.09 (0.28) | 0.06 (0.24) | 0.24 (0.43) | 0.15 (0.35) |
| Firm size/1000 | 0.58 (1.54) | 0.68 (1.32) | 0.60 (1.12) | 0.43 (1.30) |
| Supervise others | 0.37 (0.48) | 0.52 (0.50) | 0.32 (0.47) | 0.31 (0.46) |

Data Source: *Multi City Survey of Urban Inequality (MCSUI)*. Weighted means are reported, with their standard errors in parentheses, for the subsample used to estimate Model 1 and Model 2. Reported *t*-test are for comparison of the mean for a group relative to the mean for light-skinned blacks. *, **, *** indicates significance at the 1, 5, and 10 percent levels.

and to assess if the skin-shade depiction of groups offers different insights about the connection between groups and wages than the conventional bivariate delineation of race. The Rainbow model we estimate is specified as follows

$$(1) \ln w_i = \alpha + \beta(\text{SkinShade}_i) + \gamma(X_i) + \varepsilon_i$$

where $\ln w$ is the log of the wage a worker receives on their job. The vector *SkinShade* contains a set of indicator variables that reveal if a black employee's skin shade is judged to be light, medium, or dark. The vector *X* contains all of the other determinants of the wage rate.

The one-drop model of wage determination we estimate is

$$(2) \ln w_i = \theta + \psi(\text{Black}_i) + \delta(X_i) + \mu_i$$

Black is a conventional bivariate indicator variable that identifies black employees.

Equations 1 and 2 are estimated using data drawn from the MCSUI. White workers are the reference category in both models. In the rainbow model $\hat{\beta}$ reveals the difference between the wages of white workers and blacks of a particular skin shade, *ceteris paribus*. Thus, our estimates of $\hat{\beta}$ will directly reveal if the interracial wage gap is greater between white and dark-skinned black workers than between white and light-complexioned black employees. Comparing our estimates of $\hat{\beta}$ from the rainbow model with our estimate of ψ , the impact on the wage of being black generated by the one-drop model, with the same data will provide guidance as to the importance of accounting for the skin shade of black workers when attempting to understand how race influences wages.

IV. Empirical Results: Skin Shade and Wages

A. Does Skin Shade Affect the Interracial or Intra-racial Wage Gap?

Table 2 is a summary table of our race and skin-shade estimates of Equations 1 and 2. We estimate four different models that vary slightly in terms of labor market attributes that are controlled. Panel A of Table 2 reports our interracial findings generated by the one-drop model specification. Interracial and intraracial results from estimating the rainbow model are presented in Panel B.¹³ In addition, Panel B displays *F*-test results for intraracial differences based on skin shade as well as a joint hypothesis test that both light- and medium-skinned males jointly earn significantly different wages than dark-skinned males.

1. The Skin-shade Wage Gradient: Mean Regression Evidence

We begin by focusing on our results from Model 1, a conventional wage equation that controls for human capital, demographic factors, and workplace characteristics. Our estimate of the interracial wage difference produced by the one-drop approach reveals that black workers in our MCSUI sample earn significantly lower wages than their white counterparts. We find that black worker earn 15.5 percent less than comparable white workers. This is similar to the racial wage gap reported by other investigators using a variety of data sets with a similar model specification (see Darity and Mason 1998; Altonji and Blank 1999; Couch and Daly 2002).

The interracial estimates generated by the rainbow model reveal that black workers who are either dark-skinned or medium-skinned also earn significantly lower wages than white workers—between 16 and 17 percent less. The estimated interracial wage gap is much smaller, only 7.6 percent when comparing white workers and light-skinned workers, and is only half as large as the estimated wage penalty (15.5 percent) in the bivariate or one-drop model. Moreover, the estimated 7.6 percent wage disadvantage is not statistically significantly different from whites.

13. Tables that present the coefficient estimates for all of the variables included in Model 1 and Model 2, using both the MCSUI data and the NSBA, data are available from the authors upon request. Estimates correspond with conventional expectations.

Table 2

The Impact of Race and Skin Tone on Wages for Males: Mean Regression Summary Table

| Data Source: <i>Multi City Survey of Urban Inequality</i> Dependent Variable: In hourly wage | | | | |
|--|--|----------------------|----------------------|----------------------|
| Panel A: One-Drop Model | | | | |
| Variables | Model 1 (n=948) | Model 2 (n=948) | Model 3 (n=921) | Model 4 (n=921) |
| Black | -0.155*** (0.028) | -0.100*** (0.030) | -0.121*** (0.029) | -0.072** (0.031) |
| Adjusted R squared | 0.41 | 0.43 | 0.43 | 0.45 |
| Panel B: Rainbow Model | | | | |
| Variables | Model 1 | Model 2 | Model 3 | Model 4 |
| Light black | -0.076 (0.060) | -0.031 (0.061) | -0.036 (0.060) | 0.001 (0.060) |
| Medium black | -0.166*** (0.037) | -0.112*** (0.039) | -0.153*** (0.037) | -0.106*** (0.038) |
| Dark black | -0.168*** (0.036) | -0.110*** (0.037) | -0.116*** (0.036) | -0.063* (0.038) |
| Groups compared | <i>F</i> -tests for Significant Wage Differences Between Skin-shade Groups | | | |
| Light vs dark | [0.155] | [0.218] | [0.214] | [0.214] |
| Light vs medium | [0.164] | [0.207] | [0.069]* | [0.069]* |
| Medium vs dark | [0.968] | [0.963] | [0.386] | [0.386] |
| Light vs dark & medium vs dark | [0.329] | [0.418] | [0.184] | [0.215] |
| Adjusted R Squared | 0.41 | 0.41 | 0.43 | 0.45 |
| Controls for | | | | |
| Human capital | yes | yes | yes | yes |
| Demographics | yes | yes | yes | yes |
| Workplace characteristics | yes | yes | yes | yes |
| Family and neighborhood | | yes | | yes |
| Occupation | | | yes | yes |

Note: Coefficient estimates using OLS are reported and standard errors are shown in parentheses. Variables are described in Appendix Table 1. *P*-values for *F*-statistics are shown in square brackets. *, **, *** indicates significance at the 1, 5, and 10 percent levels.

The evidence that the interracial wage gap is smaller for light-skinned blacks compared to those with darker skin tone is consistent with the *preference for whiteness* theory. In particular, the penalty associated with having medium or dark skin tone relative to white is highly statistically significant and more than twice as large as the penalty associated with having light skin tone. However, based on *F*-tests results reported in Table 2, we typically do not detect statistically significant intraracial wage differences associated with skin shade. Thus, this empirical exercise provides some evidence, albeit weak, of a skin-shade wage gradient.

We estimate Model 2 in order to address concerns that our measured racial wage gap in Model 1 is capturing some unobserved (or unmeasured) productivity differential, rather than differential labor market treatment (discrimination) (see Heckman 1998, for example).¹⁴ The list of articulated unobserved variables in the literature includes culture, family values, natural ability, social capital, educational quality, and motivation.¹⁵ In the literature on racial wage differences, family background and neighborhood characteristics are used, when available, to proxy for these omitted productivity linked variables.¹⁶ Therefore, we estimate Model 2, which includes measures of family and neighborhood features.¹⁷

When comparing the labor market experience of blacks of varying skin shade, the omitted variable criticism, suggests that differences in culture, family values, natural

14. Racial differences in genetics also have been claimed as an unobserved explanatory factor for racial wage gaps. For example, Herrnstein and Murray (1994) in the *Bell Curve* suggested that blacks on average have lower cognitive ability or intelligence than typical whites. An extension of this perspective may lead to the presumption that persons with darker skin shade have more African ancestry and are less cognitively able. However, there is little evidence or reason to take seriously such claims. According to Lewontin (2005)—Professor Emeritus of Zoology at Harvard and a highly regarded scholar in the arena of race and genetics—although there is immense human genetic variation “only 6-10 percent of the total human variation is between the classically defined geographic races that we think of in an everyday sense as identified by skin color,” leading to the abandonment of race as a biological category. Moreover, Scarr et. al (1977) using spectrophotometric measures of skin shade and blood markers of ancestry sought to examine the relationships between genetics, skin shade and I.Q. scores. They find no evidence of a correlation between African ancestry and I.Q. scores, but they do find statistically significant evidence that darker skin is associated with poorer performance on a battery of I.Q. exams. Similarly, Hill (2002) found that the inclusion of socioeconomic and socioeconomic background characteristics yielded skin shade and I.Q. correlations that were statistically insignificant. Thus, these findings are suggestive of a social rather than biological link between skin shade and I.Q. scores.

15. It should be noted that these omitted factors may lead to over or under-estimates of wage gaps. For example, Goldsmith, Veum, and Darity (2000) offer evidence that greater motivation is a labor market attribute typically omitted from wage equations. They find, when using data drawn from the National Longitudinal Survey of Youth, that the inclusion of worker motivation leads to an enhancement of the black-white wage gap. In addition, Mason (1997) using the Panel Study of Income Dynamics makes a similar claim.

16. Plotnick and Hoffman (1999) and Datcher (1982) provide evidence on the contribution of family attributes as a youth to wages as an adult. A number of alternative views of how neighborhoods affect youths have been proposed. For a discussion of ideas related to culture see (Becker and Tomes (1979); to collective socialization see Wilson (1987) and Case and Katz (1991); to contagion see Crane (1991); to social capital see Glaeser, Laibson, and Sacerdote (2002), and to institutions see Corcoran et al. (1992). Plotnick and Hoffman (1999), and Ginter, Haveman, and Wolfe (2000) provide rich overviews of a wide array of arguments pertaining to how a youths neighborhood might affect their life chances.

17. Our inclusion of additional controls to proxy for unobserved labor market attributes is not without potential cost. To the extent that these presumed unobserved attributes are not linked to productivity, Model 2 and Model 4 may inefficiently inflate the estimated standard errors of the coefficients.

ability, social capital, educational quality, and motivation would vary by skin shade. Given the proximity of blacks of different hue within neighborhood, school, and even family, omitted variables bias seems less plausible as an explanation for different wage outcomes for blacks based on skin shade. Nonetheless, we still estimate the rainbow specification with family background and neighborhood controls.

The variables we include to capture family effects when the respondent was a youth include parents' education, family composition, the financial status of the family (on welfare, lived in public housing), and formal religious engagement.¹⁸ An employee's current neighborhood is depicted by the employee's perception of the quality of schools and police services, and the level of crime. (Appendix Table 1 lists and defines the variables used to capture family and neighborhood effects.)

Including controls for family and neighborhood effects reduces the size of the coefficient estimated on the race indicator variables in the one-drop model and the skin-shade identifiers in the rainbow model. However, the pattern of findings is unchanged. The estimated interracial wage gap between white and dark black workers of 11 percent and between white and medium-skinned black employees of 11.2 percent, are very close to the 10 percent difference in the wage between the average black worker and a typical white worker generated by the one-drop or bivariate approach to depicting race. A striking finding is that whites only earn 3.1 percent more than light-skinned blacks once neighborhood and family controls are added to the estimating equation and the white-to-light wage gap remains statistically insignificant. Model 2 suggests that light-skinned blacks have about an eight percentage point wage advantage over comparable medium and dark-skinned workers. However, we are unable to detect statistical significance among these intraracial differences.

We estimate Models 3 and 4 to control for interracial and intraracial differences in occupational sorting. Model 3 adds occupational controls to a conventional wage equation (Model 1), without family and neighborhood descriptors, while Model 4 adds the occupational controls to the conventional wage equation with the family and neighborhood descriptors. However, if occupational sorting is endogenously related to wage, then the coefficients estimated in these models will be biased so the findings reported must be viewed with caution. Our results indicate that the addition of occupational controls does little to alter the pattern of findings reported earlier. However, Model 3 and Model 4 do detect some statistically significant intraracial wage differences. The parameter estimates and *F*-test results indicate that light-skinned blacks earn about 11 percent more in wage than their medium-skinned peers. For all other models and all other intraracial comparisons, including

18. Few survey data sets commonly used by economists contain rich descriptors of the neighborhoods in which survey participants grew up. Plotnick and Hoffman (1999) argue that this is not a serious problem as long as the data set contains an excellent set of family controls. They find that the contribution of neighborhood youth variables to subsequent wages declines by 67 percent when a rich array of family characteristics are added to the wage equation estimated. The MCSUI provides no direct youth neighborhood information, but it does include information on whether a survey participant's family was on welfare when they were a youth and if they lived in public housing (which we include as family characteristics).

the joint test that both light- and medium-skinned blacks earn significantly different wages, the *F*-tests in Table 2 reveal no statistically significant differences.^{19, 20}

2. *Interracial and Intra-racial Wage Differences: Premarket Models that Control for Endogeneity Associated with Skill Acquisition*

Similar to endogeneity concerns related to wage specifications that include occupational controls, Neal and Johnson (1996) suggest that conventional reduced form wage models that control for non-prelabor market characteristics are likely to suffer from endogeneity bias. They argue that human capital investments that influence wages—but occur after compulsory secondary schooling, such as workplace experience, on-the-job training and marriage—are stochastic choices whose error is likely to be correlated with the error in measuring wages. Thus, if such regressors are included in a wage equation the estimates of that equation could be biased. In response, Neal and Johnson (1996) use data drawn from young men in the National Longitudinal Survey of Youth and estimate reduced form wage models that control for only pre-labor market characteristics, such as race, age, and skills prior to entering the labor market. They use a person's score on the Armed Forces Qualification Test (AFQT), to measure their premarket skill level.²¹

Table 3 presents our estimates of reduced form wage equations that only control for premarket characteristics. In addition to skin shade and race indicators, we include controls for the date in which the survey was administered, respondent's age, an indicator of whether the respondent completed their secondary education by the age of 19, and a self-reported measure of high school grade performance. In the MCSUI respondents younger than 35, the group for which the survey designers believed skills were especially important, were asked to recall their average high

19. The MCSUI over sampled black and poor households. All of our complete specifications include indicators for race and correlates with household income, nonetheless, we also estimated Models 1-4 and all the preceding models in the paper using weighted regressions (results available upon request). For Models 1-4, in the weighted regressions coefficient estimates on the light skin indicator variable are virtually unchanged. However the wage penalty for having medium skin tone declines and is now virtually equivalent to that of persons with light skin tone, while the penalty for being dark-skinned rises an additional five percent. For subsequent models in the paper, the weighted regressions did not yield substantively different results with the exception occurring in the median regression models. In these models we find that light-skinned still earn more than dark-skinned blacks, but medium-skinned blacks now earn more than light-skinned blacks. However, in our most specified median regression model that uses pre-market labor control, we find that light-skinned blacks earn more than both their medium and darker-skinned counterparts.

20. For robustness, we also estimate models using a sample that includes respondents residing in Detroit, but we are not able to control for; family formation as a youth, the average high school grades, family welfare receipt as a youth, and health limiting disability at the time of the survey. Although there are some differences with regards to statistical significance, the main points of the paper are not altered when Detroit observations are added. Tables with the Detroit findings are available from the authors upon request.

21. Using only prelabor market controls including AFQT score, Neal and Johnson (1996) estimate a seven percent racial wage gap that is not statistically significant. Even smaller wage differences between black and white workers—no more than 3 percent—are reported by Altonji and Blank (1999), and O'Neill (1990) when the AFQT is included as a control variable in mean regressions. However, Goldsmith, Veum, and Darity (1997) find a significant 5 percent racial wage gap when wages and psychological capital are jointly determined, and the AFQT is included as a control variable. Additionally, Rodgers and Spriggs (1996) also find a significant black-white wage gap with the inclusion of AFQT when they allow the test to be generated structurally different by race.

Table 3
The Impact of Race and Skin Tone on Wages for Males: Premarket Approach Summary Table

| Data Source: <i>Multi City Survey of Urban Inequality</i> Dependent Variable: In hourly wage | | | | | |
|--|--|----------------------|----------------------|----------------------|----------------------|
| Panel A: One-Drop Model | | | | | |
| Variables | Model A (n=968) | Model B (n=968) | Model C (n=968) | Model D (n=968) | Model E (n=968) |
| Black | -0.259*** (0.033) | -0.224*** (0.031) | -0.255*** (0.031) | -0.222*** (0.031) | -0.158*** (0.032) |
| Adjusted R squared | .15 | .21 | .16 | .21 | .23 |
| Panel B: Rainbow Model | | | | | |
| Variables | Model A | Model B | Model C | Model D | Model E |
| Light black | -0.104 (0.071) | -0.090 (0.068) | -0.097 (0.071) | -0.086 (0.069) | -0.020 (0.069) |
| Medium black | -0.233*** (0.042) | -0.214*** (0.041) | -0.229*** (0.042) | -0.212*** (0.041) | -0.150*** (0.041) |
| Dark black | -0.318*** (0.039) | -0.266*** (0.039) | -0.313*** (0.039) | -0.264*** (0.039) | -0.200*** (0.040) |
| Groups compared | <i>F</i> -tests for Significant Wage Differences Between Skin-shade Groups | | | | |
| Light vs dark | [0.005]*** | [0.017]** | [0.004]*** | [0.015]** | [0.013]** |
| Light vs medium | [0.093]* | [0.097]* | [0.084]* | [0.090]* | [0.075]* |

(continued)

Table 3 (continued)

| | Data Source: <i>Multi-City Survey of Urban Inequality</i> Dependent Variable: In hourly wage | | | | |
|---|--|---------------------|-----------------------|----------------------|----------------------|
| Medium vs dark Light vs dark & medium vs dark | [0.081]* [0.012]** | [0.271] [0.053]* | [0.084]* [0.011]** | [0.268] [0.048]** | [0.291] [0.044]** |
| Adjusted R Squared | 0.16 | 0.21 | 0.17 | 0.21 | 0.24 |
| Controls for | | | | | |
| Age and age squared | yes | Yes | yes | yes | yes |
| Did not complete high school by age 19 | | Yes | | yes | yes |
| Younger than 35 | | | | | |
| Self-reported poor high school performance | | | yes | yes | yes |
| Family and neighborhood at age 16 | | | yes | yes | yes |

Note: Coefficient estimates using OLS are reported and standard errors are shown in parentheses. Variables for each set of controls are described in Appendix Table 1. P-values for F-statistics are shown in square brackets. *, **, *** indicates significance at the 1, 5, and 10 percent levels.

school grade on a multipoint scale. We used information from that question to create a variable that identified individuals under the age of 35 reporting a C grade point average or lower, or not completing high school. The presumption is that individuals who do not complete high school by the age of 19 or who have low grades in high school have fewer skills when they enter the labor force and consequently are expected to receive lower wages.

We begin our analysis by estimating a log wage regression that contains only indicators of a respondent's race (Panel A) or skin shade (Panel B) and controls for age (Model A). Next, we account for an individual's premarket skill by either including a control for the amount of premarket schooling a person attained (Model B) or an indicator for poor high school performance along with a dummy variable to identify those younger than 35 years of age (Model C). Model D includes both types of premarket skill descriptors, and Model E adds to this specification premarket family and neighborhood characteristics that may influence subsequent productivity. The premarket family and neighborhood controls include foreign residence at 16 years of age, who raised the respondent, whether the family was on welfare when the respondent was a youth, and parental education.

The interracial wage gap continually widens as the skin shade of the black workers darkens for each of the five model specifications we estimate. For instance, when we estimate Model D, the specification that controls for all premarket characteristics except family and neighborhood background, we find that light-skinned blacks earn 8.6 percent less than whites while medium- and dark-skinned blacks, earn, respectively, 21.2 and 26.4 percents less than whites earn. Only the white to light wage gap is not statistically significant, as in our previous estimates.

In Model E, when family and neighborhood background controls are added, the white-to-light black gap is estimated to be only 2 percent and not statistically significant, while the respective, white to medium and white to dark black gap is estimated to be 15 and 20 percent and highly statistically significant. Furthermore, we are now able to detect, from *F*-tests, statistically significant intraracial wage differences between light-skinned and both their medium- and dark-skinned counterparts.

The *F*-tests in Table 3 in all five models indicate statistically significant intraracial differences in wage based on skin shade. We find that light-skinned blacks earn significantly more than both medium- and dark-skinned blacks, and we find that light- and medium-skinned blacks are significantly different from dark-skinned blacks, indicating a gradational relationship between skin shade and wages. Finally, when age is the sole control and when controlling for age and high school grades we find an independent effect of medium-skinned blacks earning significantly higher wages than darker-skinned blacks earn. Therefore, these reduced form models that avoid endogeneity concerns but are more susceptible to omitted variable criticisms, offer strong evidence of a wage gradient based on skin shade.

3. Interracial and Intra-racial Wage Differences: Median Regressions that Control for Selective Labor Market Participation

In this section, we follow Neal and Johnson (1996) and estimate median regression models to control for selective labor market participation. We arbitrarily assign a very low wage (\$0.01) to nonworking (zero wage) individuals and employ a median

wage regression based on the assumption that the reservation wage of these nonworking individuals is below the median wage of our sample. Thus, we are able to include individuals that may have self or otherwise selected out of the labor force.²² Similar to Neal and Johnson (1996) we estimate larger wage gaps using median rather than mean regressions.²³ This suggests that, for darker-skinned blacks, not controlling for selective labor market participation underestimates the actual wage gradient attributable to skin-shade differences.²⁴

The median regression results with conventional wage equation control variables are presented in Table 4. The findings in Table 4 correspond with the models estimated in Table 2. However, we are not able to estimate all of the same models that were estimated in Table 2, since we have to exclude any workplace characteristics to avoid having to predict values for the nonworking observations with missing workplace characteristics. Thus, we estimate two median regression models, “Model 1” which includes human capital and demographic controls (like Model 1) but excludes workplace controls, and “Model 2” which adds controls for family and neighborhood characteristics to “Model 1.” Comparison of our median regression findings for Model 1 and Model 2 with our mean regression findings for Model 1 and Model 3 (Table 2, Panel A) reveals that the black-white wage gap is about six percentage points larger than when using the mean regression approach. The *F*-tests for these median regressions do not indicate any intraracial wage differences attributable to skin shade.

The interracial configuration of the influence of skin shade on wages is the same for the median estimates as the mean estimates—a significant wage gap between white workers and black workers who are not light-skinned and a smaller, and statistically insignificant, difference in the wage level of white and light-complexioned black workers. However, the measured wage gap between white workers and black workers who are medium or dark in skin shade is larger given median estimation.

4. Interracial and Intraracial Wage Differences: Median Regressions with Premarket Controls

In this section, we present estimates of interracial and intraracial wage differences by controlling only for premarket factors and selective labor market participation with median regressions. These findings are presented in Table 5. We begin by describing

22. Heckman (1979) selection models are often used to control for selective labor market participation. However, the challenges of finding suitable instruments or exclusion restrictions are well understood (Neal and Johnson 1996). Nonetheless, relying on functional form for identification, we estimated Model 1 using the Heckman two-step selection procedure, and, based on our statistically insignificant inverse Mills ratio, do not find statistical evidence of selection bias.

23. Using data on young males from the National Longitudinal Youth Survey (NLSY), Neal and Johnson estimate a 7.2 percent white-black wage gap based on a mean regression (Neal and Johnson (1996) Model 3 in Table 1, pp. 875) and a 13.4 percent white-black wage gap based on a median regression (Neal and Johnson (1996) Model 2 in Table 4, pp. 883).

24. The percent of working black respondents who meet our data restrictions (those analyzed in Table 2), that are light, medium, or dark respectively is 11, 41, 48. In contrast, those who are included in these median regressions, and who are not currently working are respectively, 9, 37 and 54 percent light, medium and dark. Hence, this indicates that as skin shade darkens there is a greater likelihood that number of eligible workers who are not employed rises.

Table 4

The Impact of Race and Skin Tone on Wages for Males: Median Regression Summary Table

| Data Source: <i>Multi City Survey of Urban Inequality</i> | | |
|---|--|-----------------------|
| Dependent Variable: In hourly wage | | |
| Panel A: One-Drop Model | | |
| Variables | “Model 1” (n=1171) | “Model 2” (n=1171) |
| Black | -0.205*** (0.055) | -0.157*** (0.046) |
| Pseudo <i>R</i> squared | .11 | .11 |
| Panel B: Rainbow Model | | |
| Variables | “Model 1” | “Model 2” |
| Light black | -0.064 (0.105) | -0.115 (0.100) |
| Medium black | -0.188*** (0.064) | -0.190*** (0.064) |
| Dark black | -0.240*** (0.061) | -0.183*** (0.061) |
| Groups compared | <i>F</i> tests for Significant Wage Differences Between Skin-shade Groups | |
| Light vs dark | [0.115] | [0.516] |
| Light vs medium | [0.273] | [0.477] |
| Medium vs dark | [0.476] | [0.918] |
| Light vs dark & medium vs dark | [0.280] | [0.767] |
| Pseudo <i>R</i> squared | 0.11 | 0.11 |
| Controls for | | |
| Human capital | yes | yes |
| Demographics | yes | yes |
| Workplace characteristics | | |
| Family and neighborhood | | yes |

Note: Coefficient estimates using OLS are reported and standard errors are shown in parentheses. Variables for each set of controls are described in Appendix Table 1. “Model 2” differs from Model 2 in Table 2 in that it does not contain workplace controls. *p*-values for *F*-statistics are shown in square brackets. *P*-values for *F*-statistics are shown in square brackets. *, **, *** indicates significance at the 1, 5, and 10 percent levels.

Table 5
The Impact of Race and Skin Tone on In Wages for Males: Median Regressions with Premarket Controls

| Data Source: <i>Multi-City Survey of Urban Inequality</i> Dependent Variable: In hourly wage | | | | | |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|
| Panel A: One-Drop Model | | | | | |
| Variables | Model A (n=1,171) | Model B (n=1,171) | Model C (n=1,171) | Model D (n=1,171) | Model E (n=1,171) |
| Black | -0.371*** (0.057) | -0.272*** (0.045) | -0.384*** (0.051) | -0.267*** (0.046) | -0.226*** (0.059) |
| Pseudo R squared | .04 | .05 | .05 | .05 | .06 |
| Panel B: Rainbow Model | | | | | |
| Variables | Model A | Model B | Model C | Model D | Model E |
| Light black | -0.064 (0.126) | -0.065 (0.116) | -0.119 (0.119) | -0.060 (0.108) | -0.057 (0.109) |
| Medium black | -0.319*** (0.074) | -0.274*** (0.068) | -0.351*** (0.070) | -0.265*** (0.064) | -0.222*** (0.066) |
| Dark black | -0.454*** (0.069) | -0.339*** (0.064) | -0.455*** (0.065) | -0.345*** (0.060) | -0.322*** (0.063) |

F tests for Significant Wage Differences Between Skin-shade Groups

| | | | | | |
|--|------------|-----------|------------|-----------|-----------|
| light vs dark | [0.003]*** | [0.026]** | [0.007]*** | [0.013]** | [0.021]** |
| Light vs medium | [0.060]* | [0.096]* | [0.070]* | [0.077]* | [0.157] |
| Medium vs dark | [0.116] | [0.409] | [0.197] | [0.280] | [0.173] |
| Light vs dark & medium vs dark | [0.010]*** | [0.083]* | [0.024]*** | [0.041]** | [0.055]* |
| Pseudo <i>R</i> squared | 0.05 | 0.05 | 0.05 | 0.06 | 0.06 |
| Controls for | | | | | |
| Age, age squared | yes | yes | yes | yes | yes |
| Did not complete high school by age 19 | | yes | | yes | yes |
| Self-reported poor high school performance | | | yes | yes | yes |
| Family and neighborhood | | | | | yes |

Note: Coefficient estimates using OLS are reported and standard errors are shown in parentheses. Variables for each set of controls are described in Appendix Table 1. *p*-values for *F*-statistics are shown in square brackets. *, **, *** indicates significance at the 1, 5, and 10 percent levels.

our results for Model D, which includes both premarket skill descriptors—secondary education completed and classroom performance. The findings are extremely robust to model specification. The interracial wage gap between white workers and blacks with light skin shade is only 6 percent and it is not statistically significant. The interracial wage gap widens to 26.5 percent when whites are compared to blacks with medium complexion and it widens further to 34.5 percent for whites relative to blacks with dark skin tone, and these wage gaps are statistically significant. In addition, blacks with light skin shade earn significantly higher wages than blacks with medium skin tone and blacks with dark skin shade, while the 8 percent wage gap between medium- and dark-skinned blacks is insignificant. When family and neighborhood controls are added (Model E), the results remain intact with the lone exception that the wage difference between blacks with light and medium skin shade is no longer significant at the 10 percent level.

The F -tests in the bottom panel of the table reveal substantial intraracial differences attributable to skin shade. In all five models, we find that light-skinned blacks earn significantly higher wages than dark-skinned blacks, and the same is true for light-skinned in comparison to medium-skinned blacks in all but Model E, where family background is added to the other premarket controls. Moreover, in all five models, the joint F -tests show that light-skinned and medium-skinned blacks earn different wages than dark-skinned blacks, which indicates that skin shade is gradationally related to wages. These findings are consistent with the *preference for whiteness* theory, which predicts that the more proximate blacks are to whites in terms of skin shade, the higher their wage.

B. Intraracial Wage Differences: Robustness Based on the National Survey of Black Americans (NSBA)

The National Survey of Black Americans (NSBA; Jackson and Gurin 1996) is an interview-based panel data set consisting of four waves. The initial survey of 2,107 blacks was conducted in 1978–79. The sample comes from a national multistage probability sample of black Americans aged 18 and older, in which each black American household in the continental United States had an equal likelihood of being selected. Due to high attrition, we limit our analysis to cross-sectional data drawn from the first wave of the NSBA.

The NSBA data we analyze contains 18–65-year-old non-self-employed working males. We further restrict the data using the same set of criteria adopted when selecting the MCSUI data to analyze—the elderly are excluded as well as those who fail to provide relevant information on socioeconomic and demographic factors. In addition, we confine the analysis to persons reporting hourly wages.²⁵ As a result of this restriction, the data we analyze correspond to persons largely in nonprofessional

25. Many NSBA respondents reported their earning in increments other than hourly wages. When survey participants reported earnings on a weekly, monthly, or annual basis most of these individuals also reported their hours worked over the associated interval. We imputed hourly earnings for each of the 107 respondents who provided earnings and hours worked data rather than an hourly wage. This exercise produced many unrealistic wages and a mean wage that is three times larger than the mean for those reporting hourly pay.

occupations and are thus not fully compatible with the MCSUI data, where more than 40 percent of the workers hold professional or managerial posts.

The NSBA data we analyze for our fully specified wage model contains 331 black male observations. The distribution of blacks by skin shade in the NSBA sample we analyze is very similar to the distribution of our MCSUI data. In the NSBA subsample we analyze, 12 percent (39) were designated as light-skinned, 47 percent (155) were placed in the medium skin tone category, and 41 percent (137) were classified as having dark skin.

1. NSBA Summary Statistics and Skin Shade

Table 6 reports summary statistics for blacks as a group and by skin-shade category, for the key variables used in our analysis. The data are reported in a series of panels and variable definitions are presented in Appendix Table 2.

The average person in our NSBA subsample is 35.5 years old, has completed just over 11 years of schooling, and 22 percent have at least attended college. The typical worker in our sample has been with their current employer for over five years, and 52 percent are married. Virtually all of the NSBA survey participants in our subsample are nonimmigrants (1 percent were foreign residents when 16 years of age). Since the data are restricted to employees reporting an hourly wage, only 3 percent of our sample holds managerial or professional positions at work and 38 percent are union members. Only 3 percent are employed part-time, and 21 percent supervise others.

Mean hourly wages, reported in Panel A of Table 6, are significantly higher for light-skinned blacks (\$7.01) than for medium- (\$6.04) and dark-skinned blacks (\$6.19). Inspection of the table reveals that light-skinned blacks have better characteristics than nonlight blacks on many variables expected to foster higher wages, and the differences tended to be statistically significantly higher for education indicators.

To determine whether there is an intraracial wage gap associated with skin shade among black workers in our NSBA subsample, we estimate the following log-linear wage model:

$$(3) \quad \ln w_i = \pi + \lambda(\text{LightSkinShade}) + \varphi(\text{DarkSkinShade}) + \phi(X_i) + v_i$$

LightSkinShade and *DarkSkinShade* are indicator variables that identify skin shade. Black workers with “medium” skin shade are the reference category. The remaining variables are the same as in Equations 1 and 2. Our estimate of $\hat{\lambda}(\hat{\varphi})$ reveals the difference between the wages of light- (dark-) skinned black workers and medium-skinned black employees, *ceteris paribus*.

2. Skin Shade and Intraracial Wage Differences: NSBA Evidence

Table 7 is a summary table that presents evidence on the influence of skin shade for comparable model specifications explored with the MCSUI data.²⁶ Our estimates indicate that a typical light-skinned black worker earns statistically significantly more

26. The full set of estimates for each of the models is available from the authors upon request. It should be noted that the coefficient estimates generated the expected sign.

Table 6

Summary Statistics for Variables in the Econometric Analysis, National Survey of Black Americans: Males

| Variables | Black (n=331) | Light Black (n=39) | Medium Black (n=154) | Dark Black (n=133) |
|--|------------------|-----------------------|-------------------------|-----------------------|
| Panel A: Wages and Human Capital | | | | |
| W | 6.22 (2.73) | 7.01 (2.64) | 6.04** (2.69) | 6.19* (2.78) |
| Schooling | 11.26 (2.50) | 11.74 (2.17) | 11.41 (2.46) | 10.93* (2.60) |
| High school dropout | 0.40 (0.49) | 0.23 (0.43) | 0.41** (0.49) | 0.44** (0.50) |
| High school | 0.37 (0.48) | 0.51 (0.51) | 0.35* (0.48) | 0.36 (0.48) |
| Attend college | 0.23 (0.42) | 0.26 (0.44) | 0.24 (0.43) | 0.20 (0.40) |
| Tenure | 5.32 (7.60) | 5.95 (8.08) | 5.21 (7.86) | 5.27 (7.20) |
| Panel B: Demographic Characteristics | | | | |
| Age | 35.58 (12.08) | 34.82 (11.56) | 34.99 (11.67) | 36.49 (12.73) |
| Married | 0.53 (0.50) | 0.56 (0.50) | 0.52 (0.50) | 0.53 (0.50) |
| Number of dependents | 1.24 (1.47) | 1.05 (1.36) | 1.25 (1.45) | 1.29 (1.53) |
| Disability | 0.27 (0.44) | 0.41 (0.50) | 0.21** (0.41) | 0.29 (0.46) |
| Foreign resident at age 16 | 0.01 (0.11) | 0.03 (0.16) | 0.01 (0.11) | 0.01 (0.09) |
| Panel C: Workplace Features and Location | | | | |
| Union | 0.38 (0.49) | 0.36 (0.49) | 0.34 (0.48) | 0.42 (0.50) |
| Work part-time | 0.03 (0.16) | 0.03 (0.16) | 0.03 (0.18) | 0.02 (0.15) |
| Firm size | 0.54 (0.50) | 0.62 (0.49) | 0.56 (0.50) | 0.50 (0.50) |
| Supervise others | 0.22 (0.41) | 0.26 (0.44) | 0.21 (0.41) | 0.21 (0.41) |

(continued)

Table 6 (continued)

| Variables | Black (n=331) | Light Black (n=39) | Medium Black (n=154) | Dark Black (n=133) |
|-----------------------------|------------------|-----------------------|-------------------------|-----------------------|
| Panel D: Premarket Factors | | | | |
| Mother high school graduate | 0.26 (.44) | 0.33 (0.48) | 0.27 (0.45) | 0.22 (0.41) |
| Father high school graduate | 0.18 (0.38) | 0.28 (0.46) | 0.21 (0.41) | 0.11** (0.32) |
| Mother raised | 0.92 (0.28) | 0.92 (0.27) | 0.91 (0.29) | 0.92 (0.26) |
| Father raised | 0.67 (0.47) | 0.72 (0.46) | 0.64 (0.48) | 0.70 (0.46) |

Note: Data Source; *National Survey of Black Americans (NSBA)*. Means are reported, with their standard errors in parentheses, for the subsample used to estimate Model 1 and Model 2. Reported t-test are for comparison of the mean for a skin-shade group relative to the mean for light-skinned blacks. *, **, *** indicates significance at the 1, 5, and 10 percent levels.

than 10 percent higher wages than a comparable medium-skinned black worker. This estimated light-skin wage advantage is only two to three percentage points higher than the light to medium skin-shade wage gap estimated with the MCSUI data, which was collected over ten years after the NSBA. However, although our estimates reveal that blacks with light complexion earn 10 percent more than blacks with dark skin, the finding is not statistically significant. This pattern of findings and statistical significance is maintained when controls are included for family and neighborhood factors (Model 2).²⁷ Adding occupational controls to either Model 1 or 2 results in a significantly larger wage for light-skinned blacks over both medium- and dark-complexioned blacks. In summary, after controlling for a wide range of productivity-linked factors along with family and neighborhood characteristics, we find some evidence consistent with the prediction of the *preference for whiteness* hypothesis—that an intraracial wage gap exists and favors light-skinned blacks.²⁸

27. Corcoran et al. (1992) find that once family characteristics are taken into account, the only neighborhood characteristics during youth, with a strong connection to wages earned as an adult, is the percentage of a community's families on welfare. This in turn, is positively correlated with the racial composition of the community—the lone variable provided in the NSBA on a youth's neighborhood.

28. An interesting question is whether the wage reward for light complexion and the wage penalty for dark-skinned shade, relative to a medium-skinned tone, are smaller in communities where a larger share of the neighborhood is black. We constructed an indicator variable that identifies whether the community a respondent resides in is mostly black, and interacted this variable with the indicator variable for light-skinned tone and the dummy variable for dark-skinned shade. Then we added these two interaction terms to the reduced form wage equations we estimated. Our evidence suggests that the influence of skin tone on wages is independent of the racial composition of the area where a person lives since the estimated coefficients on both of the interaction terms and on the indicator variable for mostly black neighborhood are insignificant.

Table 7*The Impact of Skin Tone on Wages for Males: Summary Table*

| Data Source: <i>National Survey of Black Americans</i> | | | | |
|--|---|--------------------|--------------------|--------------------|
| Dependent Variable: In hourly wage | | | | |
| One-Drop Model | | | | |
| Variables | Model 1 (n=331) | Model 2 (n=331) | Model 3 (n=331) | Model 4 (n=331) |
| Light black | 0.107* (0.061) | 0.126** (0.062) | 0.107* (0.059) | 0.133** (0.060) |
| Dark black | 0.012 (0.034) | 0.030 (0.042) | -0.003 (0.038) | 0.013 (0.040) |
| Groups compared | <i>F</i> tests for Significant Wage Differences Between Skin-shade Groups | | | |
| Light vs dark | [0.125] | [0.136] | [0.062]* | [0.051]* |
| Adjusted <i>R</i> squared | .43 | .43 | .49 | .49 |
| Controls for | | | | |
| Human capital | yes | yes | yes | yes |
| Demographics | yes | yes | yes | yes |
| Workplace characteristics | yes | yes | yes | yes |
| Family and neighborhood | | yes | | yes |
| Occupation | | | yes | yes |

Note: Coefficient estimates using OLS are reported and standard errors are shown in parentheses. Variables for each set of controls are described in Appendix Table 2. *P*-values for *F*-statistics are shown in square brackets. *P*-values for *F*-statistics are shown in square brackets. *, **, *** indicates significance at the 1, 5, and 10 percent levels.

V. Decomposing Interracial And Intra-racial Wage Inequality: Are Those With Lighter Skin Shades Treated Better?

An important hypothesis offered in this paper is that possessing features of the white in-group leads to better treatment in the labor market, so that as skin complexion darkens (the workers features become less similar to whites) the treatment of labor market characteristics that influence wages worsens. In order to formally explore this hypothesis and to shed further light on the source of the wage gap between skin-shade groups, we decompose interracial and intraracial wage gaps (see Blinder 1973; Oaxaca 1973) into differences due to coefficient estimates and to differences associated with alternative levels of the wage determinants. Our findings

are based on separate estimates of Model 1, a conventional wage equation, for whites, blacks, and each skin-shade group.²⁹

The *Coefficient Effect* indicates the predicted percentage wage gain or loss that a reference group individual would attain if, given their labor market characteristics, they had the wage-generating ability (regression coefficients) of a comparison group. For the interracial comparisons, whites are the reference groups and, for the intraracial comparisons, blacks taken as a whole are the reference group.³⁰ A positive estimate is an indication that the reference group member's labor market characteristics are treated better in relation to the comparison group, whereas the opposite is the case for a negative estimate. Hence, the *Coefficient Effect* serves as our indicator for labor market treatment based on race and skin shade. The *Characteristic Effect* indicates the predicted percentage gain or loss that an individual from the reference group would attain if, given their group's wage-generating ability, they had the labor market characteristics (mean characteristics) of a comparison group. The *Characteristic Effect* provides an estimate of wage differences due to different group endowments.

Panel A in Table 8 uses MCSUI data and presents interracial characteristic and coefficient effects for whites in comparison to blacks and blacks disaggregated by skin shade. Panel B presents intraracial comparisons based on NSBA data with the entire sample of black respondents serving as the reference group.

Our characteristic effect estimates reveal that whites would suffer an 11–12 percent wage decrease, if, given their wage-generating ability, they had the labor market characteristics of medium- and dark-skinned blacks. However, when comparing light-skinned blacks, the results suggest that whites would experience a modest 2.5 percent wage gain if they had the labor market characteristics of light-skinned blacks. Panel B indicates that if the typical black worker in the NSBA had the characteristics of dark- or medium-skinned workers they would experience a very small change in their wage. However, the average black is predicted to experience a 6 percent wage gain if they had the characteristics of light-skinned blacks. Thus, characteristic differences are part of the explanation for why the interracial and intraracial wage gap is greater for blacks with darker skin shade.

In terms of coefficient explanation of the wage gap, we estimate that whites would suffer a 13 to 14 percent wage loss if they had the coefficient estimates of the typical medium- or dark-skinned black worker. However, a substantially smaller wage loss would amount, 4.5 percent, if whites had the coefficient estimates of light-skinned blacks. This suggests that light-skinned blacks experience slightly worse treatment than whites, but considerably better treatment than their darker-skinned counterparts. Similarly, using data from the NSBA we estimate that a typical black worker would realize a 16 percent wage gain if they had the coefficient estimates of the light-skinned blacks.

In summary, our decomposition findings are consistent with the notion that lighter-skinned blacks receive more preferential labor market treatment, based on coefficient estimates, than their darker-skinned peers. However, the evidence does not support

29. We also conducted our decomposition analysis on Models 4 and 5 (which are available from the authors upon request), and the results were not substantively different from the Model 3 presented in Table 8.

30. These decompositions were performed using different reference groups as well and the results are available from the authors upon request.

Table 8

Skin-shade Wage Decompositions: Predicted InterRacial and IntraRacial Wage Gaps Due to Differences in Coefficients or Characteristics

| | Coefficient Effect | Characteristic Effect |
|--|---|--|
| Other group | Percent Wage Gain/Loss for the Reference Group Attributable to Different Comparative Group Coefficients | Percent Wage Gain/Loss for the Reference Group Attributable to Different Comparative Group Characteristics |
| Panel A: InterRacial Wage Differences <i>MCSUI</i> Data White = Reference Group | | |
| Black | -11.98 | -10.38 |
| Dark black | -13.73 | -12.14 |
| Medium black | -13.15 | -10.85 |
| Light black | -4.59 | 2.52 |
| Panel B: InterRacial Wage Differences <i>NSBA</i> Data Black = Reference Group | | |
| Dark black | 0.01 | -0.28 |
| Medium black | -0.27 | -1.22 |
| Light black | 16.23 | 6.05 |

Note: Reported results are based on a wage equation that controls for human capital, demographics, and workplace features (Model 1). The reference group is white for the *Multi City Survey of Urban Inequality (MCSUI)* data, which are distributed: white ($n = 513$), dark black ($n = 207$), Medium black ($n = 177$), and light black ($n = 51$). The reference group is black for the *National Survey of Black Americans (NSBA)* data which are distributed: dark black ($n = 133$), medium black ($n = 154$), and light black ($n = 39$).

the conjecture that employers value the characteristics of medium-skinned blacks more than the characteristics of dark-skinned blacks.

VI. Concluding Remarks

The convention in economics is to capture the influence of race on the wage rate by using a bivariate indicator variable. This perspective that views workers as either white or black, which we refer to as the one-drop approach, imposes the assumption that all black workers should be pooled together when exploring the link between race and wages. Given this framework, when we estimate a traditionally specified wage equation, we find that black workers earn wages that are about 15 percent less than comparable white workers.

This paper offers an alternative perspective on the link between race and wages that we refer to as the theory of the *preference for whiteness*. This theory asserts that—possessing characteristics of the white in-group, in the form of skin shade, leads to preferential treatment of workers with lighter skin tone. This theory predicts there will be an interracial (white-black) wage gap that rises as the skin shade of the black workers darkens, and there will be an intraracial (between blacks of different skin shades) wage gap that is greater when the skin-shade differences are larger.

Using data drawn from the Multi City Study of Urban Inequality (MCSUI) along with a conventional wage specification, we find that the wage difference between white workers and medium or dark-skinned blacks are considerably larger than in comparison to their lighter-skinned counterparts, yet we are not able consistently to detect statistically significant intraracial skin-shade differences. However, if the wage equation is specified to include only premarket factors, a la Neal and Johnson (1996), we find a similar pattern of dark and medium-skinned blacks suffering from larger wage gaps than light-skinned blacks, and we also find significant evidence of a skin-shade wage gradient where wages fall as skin shade darkens. Moreover, when we estimate a median regression analysis that includes potential workers not currently working, both the interracial and intraracial wage gaps become even more pronounced. Finally, median regression analyses using only premarket controls yield both interracial and intraracial wage gaps that rise as skin shade darkens. In terms of robustness, data from the National Survey of Black Americans (NSBA) provide additional evidence that black workers with light complexion earn significantly more—about 10–12 percent—than darker blacks.

We offer an additional examination of the hypothesis that workers with lighter skin shade are treated more favorable than their darker-skinned counterparts because of their phenotypical proximity to the white in-group. We perform Blinder (1973) and Oaxaca (1973) wage decomposition and find that lighter-skinned blacks suffers a substantially lower wage penalty as a result of the labor market coefficients, which we interpret as wage-generating ability, than their darker-skinned counterparts. Moreover, estimates from the NSBA data set suggest that the typical black worker earns over 16 percent less per hour because they do not have the wage-generating ability of a typical light skin worker.

The evidence we report, which is based on several different model specifications using two different data sets collected over ten years apart, is consistent with the notion that among blacks in the United States, *lightness*—possessing white characteristics as measured by skin shade—is rewarded in the labor market. Therefore, interracial labor market disparities produced by the one-drop perspective or bivariate characterization of race ignores the heterogeneity of labor market experiences of black subgroups. The evidence we report is consistent with the view that the treatment of race may be more similar in the United States and Latin America than previously thought.³¹ In the U.S. context, we also find that phenotype—not merely genotype—governs racial treatment in the labor market. This research suggests that more must be known about the link between phenotype and wages to obtain a deeper understanding of the connection between race and wages.

31. Ethnographic work by sociologist Eduardo Bonilla-Silva (2003) and recent explorations of “the race question” by legal scholar Tanya Hernandez (2002) display the “Latin Americanization” or “Brazilianization” of the USA concerning racial attitudes.

Appendix 1
Definition of Variables: Data Source, Multi-City Survey of Urban Inequality (MCSUI)

| Variables | Variable Definitions | Variables | Variable Definitions |
|---------------------|--|-------------------------------------|---|
| W | Respondents hourly wage at survey date | Foreign Resident at 16 years of age | 1 if respondent was primarily a foreign resident before 16 years of age, 0 otherwise |
| White | 1 if respondent is white, 0 otherwise | Los Angeles | 1 if respondent resides in Los Angeles, 0 otherwise |
| Light black | 1 if respondent is black and has light skin tone, 0 otherwise | Atlanta | 1 if respondent resides in Atlanta, 0 otherwise |
| Medium black | 1 if respondent is Black and has medium skin tone, 0 otherwise | Boston | 1 if respondent resides in Boston, 0 otherwise |
| Dark black | 1 if respondent is Black and has dark skin tone, 0 otherwise | 1994 | 1 if respondent was interviewed in 1994, 0 otherwise |
| Age | Respondents age at survey date | Union | 1 if respondent is a union member, 0 otherwise |
| Schooling | Years of schooling completed at survey date | Work Part-time | 1 if respondent works part-time, 0 otherwise |
| Tenure | Number of years employed by current employer at survey date | Firm size | Number of workers at respondents firm per 1,000 workers |
| High school Dropout | 1 if respondent failed to complete high school, 0 otherwise | Mother education | 1 if respondent's mother completed at least 12 years of formal schooling, 0 otherwise |

(continued)

Appendix 1 (continued)

| Variables | Variable Definitions | Variables | Variable Definitions |
|---|---|---------------------|--|
| High school | 1 if respondents highest level of schooling is completion of high school, 0 otherwise | Father education | 1 if respondent's father completed at least 12 years of formal schooling, 0 otherwise |
| Community college | 1 if respondents highest level of schooling is completion of community college, 0 otherwise | Both Parents Raised | 1 if lived with mother and father to age 16, 0 otherwise |
| Attend college | 1 if respondents highest level of schooling was attending college, 0 otherwise | Mother Raised | 1 if lived with mother to age 16, 0 otherwise |
| College | 1 if respondent completed college 0 otherwise | Father Raised | 1 if lived with father to age 16, 0 otherwise |
| Self-reported poor high school performance | 1 if respondent is <35 and average high school grade is C or poorer or never attended H.S., 0 otherwise | Grandparents raised | 1 if lived with grandparent(s), not parents, to age 16, 0 otherwise |
| Did not complete High School by 19 years of age | 1 if respondent did not complete high school by 19, 0 otherwise | Other raised | 1 if lived with someone other than parent(s) or grandparent(s), to age 16, 0 otherwise |
| Self-esteem | Rosenberg self-esteem Score. Scores range in ascending order from 0 to 4, | Religion attendance | 1 if respondent attended church at least once a month growing up, 0 otherwise |
| Married | 1 if respondent is married or living with a partner, 0 otherwise | Welfare as a youth | 1 if respondent's family was on welfare at some point up to age 16, 0 otherwise |

(continued)

Appendix 1 (*continued*)

| Variables | Variable Definitions | Variables | Variable Definitions |
|-------------------------|---|-----------------|---|
| Number of dependents | Number of dependents in the household | Jail as a youth | 1 if respondent has ever been incarcerated or attended reform school, 0 otherwise |
| Disability | 1 if respondent has a work limiting health condition, 0 otherwise | Public housing | 1 if respondent currently lives in public housing, 0 otherwise |
| Good police | 1 if respondent believes police services in current neighborhood are good, 0 otherwise | Production | 1 if respondent is in a precision production, craft or repair occupation, 0 otherwise |
| Good schools | 1 if respondent believes public schools in current neighborhood are good, 0 otherwise | Services | 1 if respondent is in a service occupation, 0 otherwise |
| Low crime | 1 if respondent believes level of crime is low in the current neighborhood, 0 otherwise | Craft | 1 if respondent is in a craft occupation, 0 otherwise |
| Supervise others | 1 if respondent supervises other employees, 0 otherwise | Laborers | 1 if respondent is in a laborer occupation, 0 otherwise |
| Manager or Professional | 1 if respondent is in a managerial or professional occupation, 0 otherwise | Government | 1 if respondent is in a public employee, 0 otherwise |

Appendix 2
Definition of Variables: Data Source, National Survey of Black Americans (NSBA)

| Variables | Variable Definitions | Variables | Variable Definitions |
|---------------------|---|-------------------------|---|
| W | Respondents hourly wage at survey date | Supervise others | 1 if respondent supervises other employees, 0 otherwise |
| Light black | 1 if respondent is Black and has light skin-tone, 0 otherwise | Manager or professional | 1 if respondent is in a managerial or professional occupation, 0 otherwise |
| Medium black | 1 if respondent is Black and has medium skin-tone, 0 otherwise | production | 1 if respondent is in precision production, craft or repair occupation, 0 otherwise |
| Dark black | 1 if respondent is Black and has dark skin-tone, 0 otherwise | Services | 1 if respondent is in a service occupation, 0 otherwise |
| Age | Respondents age at survey date | Craft | 1 if respondent is in a craft occupation, 0 otherwise |
| Schooling | Years of schooling completed at survey date | Laborers | 1 if respondent is in a laborer occupation, 0 otherwise |
| Tenure | Number of years employed by current employer at survey date | Clerical | 1 if respondent is in a clerical occupation, 0 otherwise |
| High school Dropout | 1 if respondent failed to complete High School, 0 otherwise | Missing occupation | 1 if respondent occupation code is missing or unreported, 0 otherwise |
| High school | 1 if respondents highest level of schooling is completion of High School, 0 otherwise | government | 1 if respondent is in a public employee, 0 otherwise |

(continued)

Appendix 2 (continued)

| Variables | Variable Definitions | Variables | Variable Definitions |
|-------------------------------------|---|------------------|---|
| Attend college | 1 if respondents highest level of schooling was at least attending College, 0 otherwise | Mostly black Old | 1 if respondent lived in a mostly black neighborhood at 16, 0 otherwise |
| Self esteem | Rosenberg Self-esteem Score. Scores range in ascending order from 0 to 7, | Mother Education | 1 if respondent's mother completed at least 12 years of formal schooling, 0 otherwise |
| Married | 1 if respondent is married or living with a partner, 0 otherwise | Father Education | 1 if respondent's father completed at least 12 years of formal schooling, 0 otherwise |
| Number of dependents | Number of dependents in the household | Mother-raised | 1 if mother lived in the home when respondent was 16, 0 otherwise |
| Disability | 1 if respondent has a work-limiting health condition, 0 otherwise | Father Raised | 1 if father lived in the home when respondent was 16, 0 otherwise |
| Foreign resident at 16 years of age | 1 if respondent was a foreign resident before 16 years of age, 0 otherwise | Stepfather | 1 if step father lived in the home when respondent was 16, 0 otherwise |
| South | 1 if respondent resides in a southern state in the U.S., 0 otherwise | Grandmother | 1 if grand mother lived in the home when respondent was 16, 0 otherwise |
| Rural | 1 if respondent resides in a rural community, 0 otherwise | Grandfather | 1 if grand father lived in the home when respondent was 16, 0 otherwise |
| Union | 1 if respondent is a union member, 0 otherwise | Sisters | number of sisters living in respondent's home when respondent was 16 |

(continued)

Appendix 2 (continued)

| Variables | Variable Definitions | Variables | Variable Definitions |
|----------------|---|----------------------|--|
| Work part-time | 1 if respondent works part-time, 0 otherwise | Brothers | number of brothers living in respondent's home when respondent was 16 |
| Firm size | Number of workers at respondents firm per 1,000 workers | Religion Important | 1 if religion fairly important when growing up, 0 otherwise |
| Large city | 1 if a respondent lived in a large city when they were 16, 0 otherwise | Mostly black Current | 1 if respondent lives in a mostly black neighborhood at the survey date, 0 otherwise |
| Small city | 1 if a respondent lived in a small city when they were 16, 0 otherwise | Good police | 1 if respondent believes police services in current neighborhood are good, 0 otherwise |
| Small town | 1 if a respondent lived in a small town when they were 16, 0 otherwise | Good schools | 1 if respondent believes public schools in current neighborhood are good, 0 otherwise |
| Suburb | 1 if a respondent lived in a suburb when they were 16, 0 otherwise | Low crime | 1 if respondent believes level of crime is low in the current neighborhood, 0 otherwise |
| Rural area | 1 if a respondent lived in a rural area when they were 16, 0 otherwise | Low drugs | 1 if respondent believes level of drug use is low in the current neighborhood, 0 otherwise |
| Southern youth | 1 if a respondent lived in a Southern State when they were 16, 0 otherwise | | |

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