Racism in the 21st Century

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An Empirical Analysis of Skin Color

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Chapter 5
Skin Color, Immigrant Wages, and Discrimination

Joni Hersch

Abstract Immigrant workers with darker skin color have lower pay than their counterparts with lighter skin color. Whether this pay penalty is due to labor market discrimination is explored using data from the New Immigrant Survey 2003 to estimate wage equations that control for skin color, sequentially taking into account a series of individual characteristics related to labor market productivity and personal background. These characteristics include Hispanic ethnicity, race, country of birth, education, family background, occupation in source country, English language proficiency, visa status, employer characteristics, and current occupation. The analysis finds that the labor market penalty to darker skin color cannot be attributed to differences in productivity and is evidence of labor market discrimination that arises within the U.S. labor market. The largest groups of post-1965 immigrants – those from Asia and Latin America – are penalized in the U.S. labor market for their darker skin color.

Introduction

Hispanics and African Americans in the U.S. earn less than whites with comparable observable characteristics. There is also evidence that the effects of Hispanic ethnicity and African American race differ by skin color, with darker skin tone associated with inferior economic outcomes. My earlier work (Hersch 2008) presents strong evidence that immigrants with darker skin color earn less than their counterparts with lighter skin color, controlling for extensive individual and labor market characteristics, as well as for Hispanic ethnicity, race, and country of birth. The findings indicate that discrimination on the basis of skin color is the most likely cause of the wage penalty experienced by immigrants with darker skin color.

In this chapter, I expand on my earlier analysis by considering the contribution of specific individual and labor market characteristics to the observed

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penalty to darker skin color among immigrants. As in Hersch (2008), I use data from the New Immigrant Survey 2003, or NIS-2003 ([NIS]). This survey reports skin color on a uniquely detailed scale for a large sample of new lawful immigrants to the U.S. The NIS-2003 is described in the following section, and the results from alternative specifications of wage regressions are presented in "Wage Equation Estimates".

Drawing on the findings presented in "Wage Equation Estimates" that are consistent with the presence of skin color discrimination among immigrants, in "What Skin Color Can Tell Us About Discrimination" I discuss how we can use this evidence to understand the importance of discrimination in explaining the persistent ethnic and racial gap in pay in the United States. The usual method for identifying discrimination in employment against groups of workers is to estimate wage regression equations, controlling for productivity-related characteristics. But because inferring discrimination from wage regressions leaves open the possibility that any estimated pay disparity between groups is actually caused by omitted productivity characteristics, evidence on the existence of discrimination derived from wage regressions is not conclusive. The analysis below controls for an extensive set of explanatory variables that will account for most of the productivity-related factors that determine wages. As I discuss in "What Skin Color Can Tell Us About Discrimination", the negative effect on wages of darker skin color is highly unlikely to be due to productivity differences. Thus, evidence of a negative effect of gradations of skin color on wages among immigrants provides strong evidence of discrimination.

I conclude with a discussion of the prospects for assimilation of immigrants into the U.S. labor market.

The New Immigrant Survey 2003

The New Immigrant Survey 2003 is a nationally representative sample of 8,573 immigrants admitted to lawful permanent residence status in the U.S. during the period May to November 2003.[1] The sample is drawn from the electronic records compiled by the U.S. government. The sampling design comprised four strata: spouses of U.S. citizens, employment-visa principals, diversity-visa principals, and all other visa types. Those with other visa types include non-spousal family members of U.S. citizens, accompanying spouses of those with employment or diversity visas, refugees or asylees and accompanying spouses, and those who achieve lawful permanent residence status through legalization. The NIS sampling frame undersamples spouses of U.S. citizens and oversamples employment-visa principals and diversity-visa principals. In all statistical

[1] For more information, see Jasso, Massey, Rosenzweig, and Smith (forthcoming) and the survey overview available at http://nis.princeton.edu/overview.html. The data and documentation are available at http://nis.princeton.edu.

analyses, I use sample weights adjusted for the sample design as well as for differences in response by strata. Respondents and spouses provide information on a wide range of topics, including health measures, pre-immigration history, family members, income, assets, transfer payments, insurance, religion, language skills, and labor market information.

Respondents report whether they are Hispanic or Latino and are also asked to report race, choosing from the categories American Indian or Alaskan Native, Asian, Black, Native Hawaiian or Other Pacific Islander, and White. Respondents are not required to select a racial category and have the option of selecting multiple racial categories, although few do so. The majority of those who do not report a racial category report that they are Hispanic or Latino.

Skin color is measured in the NIS using a scale designed by Massey and Martin (2003), which is provided in Fig. 5.1. The color scale shows a series of otherwise identical hands with skin tones that increase in darkness. Interviewers reported the number that most closely matched the respondent's skin color using an 11-point scale, where 0 represents the lightest possible skin color and 10 represents the darkest possible skin color. This scale provides a far greater level of detail than is available in other surveys, which report skin color as one of three to five categories (e.g., very light, light, medium, dark, very dark in the National Survey of Black Americans (NSBA) 1979–1980 and the 1990 Latino National Political Survey; light, medium, dark in the Multi-City Study of Urban Inequality 1992–1994.) In the NIS-2003 data set, skin color is recorded for 4,652 respondents. Those without reported skin color were interviewed entirely by telephone and so were not observed by the interviewer.

The NIS skin color measure is based on interviewer observation, which may be subject to measurement error. Interviewers may differ in how they match up individual skin color with the scale. If there is random measurement error, the estimated effect of skin color on wages will be biased toward zero and will be estimated as smaller than true. Hersch (2008) shows that the skin color values reported in the NIS-2003 for a given country closely track measures of skin color derived by reflectance spectrophotometer reported in Jablonski and Chaplin (2000) for the same country, so any measurement error is likely to be random rather than systematic. In addition, Hersch (2008) shows that the NIS scale can appropriately be treated as an interval scale. This means that the value for skin color can be entered into the regression equation in the same way we

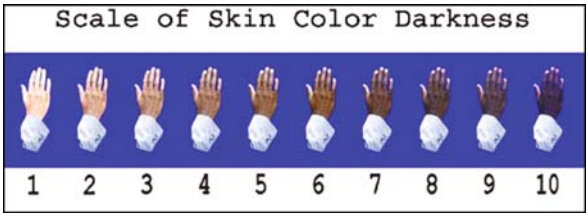

Fig. 5.1 Skin color scale (*See* Color Insert)
Source: Douglas S. Massey and Jennifer A. Martin, (2003), The NIS Skin Color Scale.

enter years of education or age, rather than as a series of indicator variables denoting the ordinal skin color category.

Figure 5.2 presents histograms of skin color by sex and Hispanic ethnicity or race for the largest groups of immigrants represented in the sample: Hispanic, Asian, non-Hispanic black, and non-Hispanic white. The histograms show considerable variation in skin color ratings both within Hispanic or racial group as well as between groups. Women have lighter skin color on average than men. This difference by sex is consistent with objective skin color measures derived using reflectance spectrophotometer, which show that women have lighter skin than men in all indigenous populations (Jablonski 2006). As the histograms in Fig. 5.2 indicate, skin color is highly correlated with race for those who are black or white. Those who self-report their race as white tend to have the lightest skin color within the sample, while those who self-report their race as black tend to have the darkest skin color within the sample. Hispanic and Asian respondents have skin color between white and black respondents, with the reported skin color of Asians somewhat lighter than the skin color of Hispanics. Although not shown in the histograms, skin color is often correlated with country of birth because country of birth is frequently determinate of race.

The wage regressions reported in the next section are based on the same sample analyzed in Hersch (2008). Because the question of interest is the effect

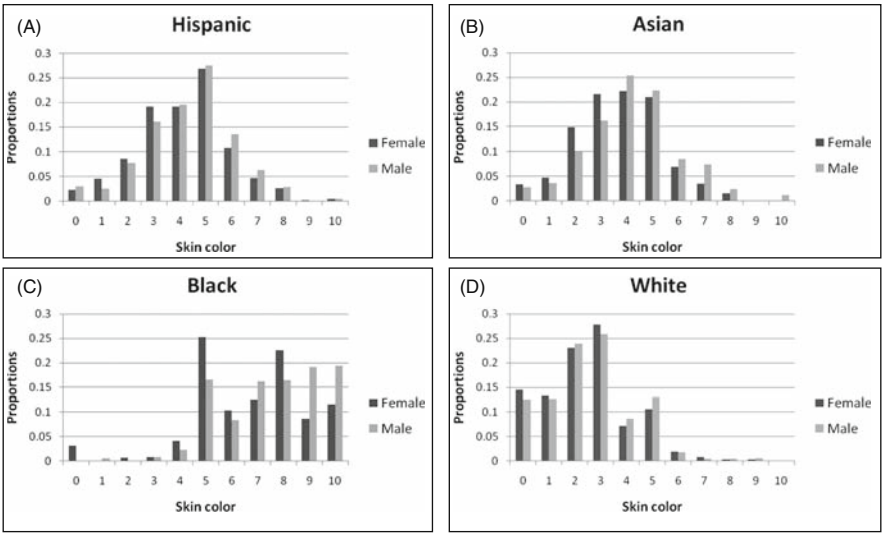

Fig. 5.2 Distribution of skin color by sex and ethnicity or race
Source: Author's calculations from the New Immigrant Survey 2003. All values weighted to account for sample design and response rates. Categories are mutually exclusive. The distribution of skin color for respondents in categories with too few respondents is not presented. These are: non-Hispanic American Indian, Non-Hispanic Hawaiian/Other Pacific Islander, non-Hispanic reporting mixed race, and those reporting neither whether Hispanic nor race.

of skin color on wages controlling for other characteristics that affect wages, the sample is restricted to those who are employed in the U.S. for pay and for whom skin color is reported. Hersch (2008) analyzes two samples: those in which individual country of birth is reported, and those in which either individual country of birth or broad country group is reported. The results presented here are based on the sample of 1,536 observations in which individual country is reported.

Table 5.1 reports sample means and standard deviations for the variables used in the wage equations, as well as the simple correlations between skin color and these variables. Most variables are typically included in wage equation

Table 5.1 Descriptive statistics and correlations with skin color[a]

	Mean (Standard Deviation) or percent	Correlation with skin color[b]
	(1)	(2)
Wage and demographic characteristics		
Skin color	4.26 (2.03)	
Hourly wage	11.83 (8.57)	–0.12**
Male	56.94	0.06*
Age	36.15 (10.13)	0.02
Inches below U.S. gender average height	3.39 (2.73)	0.14**
Inches above U.S. gender average height	2.11 (1.63)	–0.08**
Body mass index	26.13 (5.40)	0.06*
Family background and education		
Father's years of education	7.72 (5.97)	–0.15**
Childhood family income far below average	13.93	0.06*
Childhood family income below average	19.90	0.03
Childhood family income average	49.77	–0.05*
Childhood family income above average	12.37	–0.05
Childhood family income far above average	3.28	0.06*
Education in USA	1.11 (2.67)	–0.02
Education outside USA	10.63 (4.94)	–0.07**
Occupation in last job abroad		
Professional, managerial	15.81	–0.06*
Health	3.36	–0.03
Services	5.33	0.04
Sales and administrative	13.55	–0.03
Production occupation	18.60	0.03
U.S. labor market characteristics and region		
Understand English very well/well	59.47	0.03
New arrival	24.51	–0.04
Potential U.S. work experience	6.33 (6.75)	0.06*
Northeast	24.55	–0.05*
Midwest	16.65	–0.01
West	45.60	0.01
South	13.20	0.07*

Table 5.1 (continued)

	Mean (Standard Deviation) or percent	Correlation with skin color[b]
	(1)	(2)
Visa type		
Spouse of U.S. citizen	34.25	0.03
Employment visa	6.84	–0.08*
Diversity visa	3.30	–0.02
Other visa	55.60	0.02
Current job characteristics		
Tenure	2.80 (4.17)	0.09*
Government employer	3.91	0.02
Union contract	14.49	0.05
Outdoor work highly probable	3.41	0.03
Paid hourly rate	72.17	0.08*
Full-time	82.13	–0.03
Self-employed	4.94	–0.02
Current occupation		
Professional, managerial	11.28	–0.09*
Health	7.42	–0.01
Services	26.25	0.05*
Sales and administrative	17.43	–0.02
Production	37.34	0.04
Ethnicity and race		
Hispanic/Latino	60.54	0.02
American Indian/Alaska Native	3.86	0.03
Asian	18.53	–0.05
Black	7.58	0.42*
Native Hawaiian/Other Pacific Islander	0.59	–0.01
White	58.49	–0.27*
Multiple races	1.05	0.06*
Race not reported	9.90	0.10*

[a]*Source*: Author's calculations from the New Immigrant Survey 2003. All values weighted to account for sample design and response rates. Number of observations = 1536.
[b]** significant at 1%; * significant at 5% (two-sided tests).

analyses and are defined in the customary fashion (see Hersch 2008 for specific definitions). The definitions of the less common variables are as follows. New arrival immigrants acquired their immigrant documents abroad. Those who are not new arrivals are referred to as adjustee immigrants and were already in the U.S. when they reached lawful permanent residence status. Potential U.S. work experience is calculated as the difference between the date of the first job in the U.S. and the interview date. The indicator variable for whether outdoor work is highly probable is included to account for the possibility that outdoor work may both pay lower wages and cause skin color to darken. Failure to account for this possibility may spuriously indicate a negative effect on wages of darker skin color.

As indicated in Table 5.1, the average value of skin color on the 0–11 scale is 4.26. For comparison, the average values of skin color in this sample are 4.29 for Hispanic workers, 4.07 for Asian workers, 7.29 for non-Hispanic black workers, and 2.59 for non-Hispanic white workers.

Of particular interest in Table 5.1 are the simple correlations between skin color and the variables reported in column 2. Although the correlations of skin color with several of the variables are statistically significant, most of the correlations are small in magnitude. The largest simple correlations are with race, either black or white, and with father's years of education. Father's education is lower for those with darker skin color. Similarly, education before the U.S. is negatively correlated with darker skin color, although education in the U.S. is not correlated with skin color. Skin color is correlated with visa type, with those with darker skin color less likely to have an employment visa. Skin color also is correlated with height. Those who are shorter than the U.S. average height for their gender tend to have darker skin color, while those who are taller than the U.S. average height for their gender tend to have lighter skin color. This relation between skin color and height largely reflects the fact that the largest group of immigrants, those from Asia and Latin America, who are on average darker than the U.S. white population, are also on average shorter than the U.S. white population.

Wage Equation Estimates

In Hersch (2008), I show that immigrants with darker skin color earn less than their counterparts with lighter skin color, controlling for extensive individual and market characteristics, as well as controlling for Hispanic ethnicity, race, and country of birth. In this current chapter, I analyze the same sample as in Hersch (2008), expanding the analysis to investigate the contribution of individual variables or groups of variables to the estimated skin color penalty. I start with a basic specification controlling only for skin color and then sequentially add to the wage equation individual and productivity-related control variables. We expect the magnitude of the skin color coefficient to change as we add control variables that are correlated with skin color. The order in which the variables are added is intended to demonstrate the effect on the skin color coefficient as we include variables that themselves have an increasing chance of being affected by potential skin color discrimination.

To help motivate the results that follow, consider for demonstration the relation between wages, education, occupation, and skin color. It is widely established that education has a positive effect on wages and that those in professional and managerial occupations have higher earnings than those in service or production occupations. In addition, a number of studies have shown that among African Americans, darker skin color is associated with lower education (e.g., Hughes and Hertel 1990, Keith and Herring 1991, Hersch

2006), as well as with lower occupational attainment (e.g., Hughes and Hertel 1990, Keith and Herring 1991). If controls for education and occupation are omitted from the wage equation for a sample of African Americans, the coefficient on skin color will pick up the direct effect of skin color as well as the indirect effects of skin color on education and on occupation. The estimated penalty to darker skin color will be larger in wage equations that exclude education and occupation than in equations that include these variables. In general, as we add variables that are negatively correlated with darker skin color and positively correlated with wages, the magnitude of the coefficient on skin color will decline, as part of the skin color effect is explained by these additional control variables.

So, if we are interested in isolating the role of skin color discrimination in employment, should we include or exclude education and occupation in our wage regressions? Generally, wage equations intended to estimate the effect of discrimination should only include as control variables those productivity characteristics that are exogenous to the process of discrimination under study. In the current example, consider the difference between education and occupation. Since education is largely chosen or completed before an individual enters the labor market, education is a pre-market characteristic. Educational attainment may be affected by societal discrimination, but it is not under the control of employers.[2] On the other hand, employers decide whether to hire individuals for specific jobs, and this decision may indeed be affected by discrimination on the basis of skin color. Thus, education is appropriately included in the wage equation, but occupation should only be included if it can be determined that occupation is not influenced by discrimination.

By examining how the inclusion of additional variables affects the coefficient on skin color, we help identify those variables that may themselves be influenced by skin color and can isolate whether the source is pre-market or arises in the labor market. Referring to the simple correlations reported in Table 5.1, we expect that the largest impact on the skin color coefficient will come from adding those variables with the highest correlation with skin color.

Table 5.2 summarizes the coefficient on skin color and the associated adjusted R-squared from a series of wage equations. The dependent variable in all equations is the log of hourly wage. The skin color coefficients and adjusted R-squared values reported in columns 1 and 2 are based on wage regressions that do not control for Hispanic ethnicity, race, or country of birth. All of the skin color coefficients and adjusted R-squared values reported in columns 3 and 4 are based on wage regressions that control for Hispanic ethnicity, race, and country of birth.

[2] Note that although I discuss employer discrimination for purposes of this example, other sources of discriminatory treatment include coworkers and customers.

Table 5.2 Coefficients on skin color in log wage equations[a]

		No controls for Hispanic, race, country of birth		Controls for Hispanic, race, country of birth	
		Skin color coefficient	Adjusted R^2	Skin color coefficient	Adjusted R^2
Control variables[b]		(1)	(2)	(3)	(4)
1	Skin color	–0.033**	0.01	–0.017*	0.15
		(0.007)		(0.007)	
2	1 + male, age, height, weight, time period	–0.036**	0.11	–0.021**	0.24
		(0.006)		(0.007)	
3	2 + family background, education	–0.030**	0.21	–0.018**	0.29
		(0.006)		(0.007)	
4	3 + occupation in last job abroad	–0.028**	0.23	–0.018**	0.30
		(0.006)		(0.007)	
5	4 + English language, new arrival, potential U.S. work experience, U.S. region	–0.031**	0.33	–0.017**	0.38
		(0.006)		(0.006)	
6	5 + visa type	–0.027**	0.40	–0.013*	0.43
		(0.005)		(0.006)	
7	6 + tenure, employer characteristics, job characteristics	–0.027**	0.42	–0.014*	0.45
		(0.005)		(0.006)	
8	7 + occupation in USA	–0.024**	0.47	–0.011 +	0.49
		(0.005)		(0.006)	

[a]*Source*: Author's calculations from the New Immigrant Survey 2003. Number of observations = 1536. ** significant at 1%; * significant at 5%; + significant at 5.5% (two-sided tests). Table reports coefficients on skin color, with standard errors in parentheses, controlling for the indicated variables. All values are weighted to account for sample design and response weights. See Hersch (2008) for additional information.

[b]Complete list of control variables: skin color (0–11 scale); male; age; age squared; inches below U.S. gender average height; inches above U.S. gender average height; body mass index; indicators for time period; father's education; indicators for relative family income at age 16; years of education before USA; years of education in USA; indicators for occupation in last job abroad; indicators for whether the respondent understands English very well or well and for whether the respondent is a new arrival; potential U.S. work experience; potential U.S. work experience squared; indicators for region of USA; indicators for visa type; tenure with current employer; tenure squared; indicators for government employer, union contract, outdoor work probable, paid hourly rate, full-time employment, self-employed; indicators for occupation in USA. Columns 3 and 4 include indicators for Hispanic ethnicity, race, and country of birth.

Each row in the table reports the coefficient on skin color and the adjusted R-squared for the equation after adding the indicated additional variables to the variables included in the regressions reported in the preceding row. For example, the first row of Table 5.2 reports the coefficient on skin color without controlling for any other variables in the first two columns and reports the coefficient on skin color controlling only for skin color, Hispanic ethnicity, race, and country of birth in the final two columns. The second row of Table 5.2

reports the coefficient on skin color controlling for the demographic characteristics of sex, age, height, and weight, in addition to controlling for skin color. Similarly, each row adds the variables listed in the row to all of the variables indicated in the preceding rows. The entire list of variables is reported in the table note.

Because the dependent variable is the log of hourly wage, the magnitude of the coefficient on skin color is interpreted as the percent change in wages associated with a one-unit change in the skin color measure. This means that the coefficient of −0.033 in row 1, column 1 indicates that without controlling for any other variables, the effect of a one-unit increase in the skin color rating lowers wages by 3.3 percent on average. Another way to interpret the magnitude of the skin color effect is to consider the difference between those with the lightest skin color and those with the darkest. Because the skin color scale goes from 0 to 10, the coefficient of −0.033 indicates that without controlling for any other variables, those with the darkest skin color earn on average 33 percent less than those with the lightest skin color.

First, note the influence of controlling for Hispanic ethnicity, race, and country of birth on the estimated effect of skin color on wages. A comparison of columns 1 and 3 shows that inclusion of Hispanic ethnicity, race, and country of birth accounts for approximately half of the skin color effect on wages. This large reduction in the skin color coefficient is what we expect to find based on the correlations reported in Table 5.1, showing that white and black race have the largest correlations with skin color.

By controlling for Hispanic ethnicity, race, and country of birth, the independent influence of skin color is isolated. Because of the correlation between race and skin color for whites and blacks, and because it is widely established that blacks earn less than comparable whites, if race is excluded from the wage regressions, we may be estimating the effect of race on wages rather than the independent effect of skin color on wages net of the race effect. It is also reasonable to control for country of birth, as countries differ in factors such as quality of education or use of English language and thereby may lead to genuine differences in market productivity. But we also raise the possibility that the skin color effect is underestimated because of multicollinearity. Multicollinearity tends to present more problems of interpretation with small sample sizes such as this, in which there are relatively few observations from most countries of birth. Presenting both sets of results provides a sense of the range of the effect of skin color on wages.

Next, consider the effect on the skin color coefficient as we add additional explanatory variables. Row 2 includes the demographic variables of sex, age, height, and weight (as well as time period of interview to account for price changes). The penalty to darker skin color is slightly higher in row 2 because although women have lighter skin color than men, they also have lower wages. Row 3 adds variables on family background (relative family income at age 16 and father's education) as well as own education. Row 4 adds indicator variables for occupation in the worker's last job abroad. Those with more education

and higher-status jobs in their last job abroad are expected to earn more in the U.S. To the extent that workers in the sample experience skin color discrimination in their country of birth, those with darker skin color may end up with less education or in worse occupations that result in lower wages in the U.S. In addition, inclusion of family background and father's education will help control for unobserved productivity characteristics that may result from differential treatment in the country of birth on the basis of skin color. While we might have expected that the skin color coefficients would be greatly reduced by controlling for these variables, notably, the magnitudes are almost unchanged relative to the skin color coefficients reported in row 1.

Row 5 adds variables for English language proficiency, whether the worker is a new arrival, potential work experience, and U.S. region. These are characteristics that are unlikely to be affected by any potential skin color discrimination experienced before migrating to the U.S., and they are also characteristics that will have more value in the U.S. labor market than in the source country. Once again, the skin color coefficient changes very little with inclusion of these variables.

The skin color coefficients reported in rows 1–5 are derived from wage regressions that include only variables that are most likely to be exogenous to any possible discrimination in the U.S. labor market. The results reported in row 5, column 3 show that immigrants with the lightest skin color earn on average 17 percent more than comparable immigrants with the darkest skin color, even taking into account Hispanic ethnicity, race, and country of birth.

Rows 6, 7, and 8 add variables that may themselves be affected by skin color discrimination in the U.S. Row 6 adds visa type. As the simple correlations in Table 5.1 indicate, those with darker skin color are less likely to have an employment visa. Those with employment visas are in considerably higher-paying jobs. Eligibility for an employment visa generally requires employer sponsorship, and such sponsorship decisions may be influenced by skin color discrimination in the U.S. The coefficient in column 1 drops from −0.031 in row 5 to −0.027 in row 6, and the coefficient in column 3 drops from −0.017 in row 5 to −0.013 in row 6. Finally, inclusion of other work-related characteristics such as years of experience with current employer (e.g., tenure), type of employer, and occupation results in a slightly lower effect of skin color on wages. The fullest specification reported in row 8, column 3 shows an 11 percent disparity in pay between those with the lightest skin color and their counterparts with the darkest skin color.

What is notable in the current context is that even with very extensive controls, the effect of skin color on wages remains surprisingly close to the estimated effect without controls reported in row 1. The coefficient reported in row 8, which includes the fullest set of controls, is about one-third smaller than the coefficient reported in row 1. The main interpretation of the relatively small reduction in the skin color coefficient as we add controls is that skin color largely does not affect the control variables. This is consistent with the simple correlations between skin color and the variables reported in Table 5.1. Note that this small reduction in the skin color coefficient is not the result of adding worthless variables to the wage

regressions; in fact, the explanatory power of the wage regressions increases substantially as we add additional control variables, as demonstrated by the adjusted R-squared values in columns 2 and 4. The adjusted R-squared values in row 8 are 0.47 and 0.49; these values indicate that the explanatory power is quite high relative to wage regressions reported throughout the economics literature. Thus, these results indicate that skin color has an independent and direct effect on wages of new legal immigrants in the U.S.

What Skin Color Can Tell Us About Discrimination

By investigating the role of skin color and earnings among immigrants, this analysis contributes to understanding the persistent ethnic and racial gap in pay observed in the U.S. Wage regressions are typically used to identify whether comparable workers are discriminated against on the basis of their race or sex. Pay disparities on the basis of race or sex that remain after taking into account differences in productivity-related characteristics, such as work experience and education, are often interpreted as arising from discrimination. But, whether any measured pay disparity between groups is due to discrimination remains a topic of debate, as any observed disparity is potentially attributable to omitted productivity variables. For example, neighborhood effects associated with race may indeed lead to differences in realized education quality. If, say, African American students are concentrated in lower-quality schools relative to white students, then the pay gap between African American and white workers with the same years of measured education may arise from difference in actual skills.

Examining whether skin color has an independent effect on wages, net of any ethnic or racial effect, provides a way to isolate whether discrimination plays a role in any observed pay disparity. In contrast to ethnicity and race, differences in skin color do not lead to extreme differences in neighborhood or school quality. Skin color varies considerably within ethnicity and race, and varies even within families. While estimated disparities between minority workers and whites possibly may be accounted for by omitted productivity characteristics rather than discrimination, there is no evidence that skin color could affect pay via omitted productivity characteristics correlated with skin color. Specifically, there is no evidence that the relation between skin color and wages can be due to genetic factors. While there is evidence both that attractiveness is associated with higher wages, and that that those with lighter skin color are rated as more attractive, Hersch (2006) shows that the attractiveness link is not likely to be large enough to explain skin color effects of the magnitude reported here.

However, due to historic differential treatment of African Americans on the basis of skin color in the U.S., we may still be concerned that any estimated skin color effect among African Americans is due to omitted productivity characteristics associated with skin color. In contrast to African Americans,

new lawful immigrants to the U.S. will not have experienced any historic differential treatment within the U.S. on the basis of skin color. Furthermore, the effect of skin color persists even with controls for Hispanic ethnicity, race, and country of birth, which take into account the role of ethnic or racial discrimination in the U.S. and differences by country in productivity factors by country, such as quality of education and use of English language.

Skin color discrimination has been reported in a number of countries, and this too may affect actual productivity characteristics. For instance, someone with relatively light skin color in Guatemala may experience better treatment in Guatemala relative to those in their country with darker skin color. However, even if someone has light skin relative to others in their country of birth and correspondingly receive better treatment there, nonetheless, being darker relative to other immigrants in the U.S. lowers his or her wages. Finding that darker skin color adversely affects immigrant earnings after controlling for extensive individual characteristics as well as Hispanic ethnicity, race, and country of birth provides strong evidence of discrimination on the basis of skin color that is not attributable to productivity factors.

Concluding Remarks

This chapter documents a pay disparity of 17 percent between new legal immigrants to the U.S. with the lightest skin color and their counterparts with the darkest skin color. In addition to providing evidence on the presence of discrimination, finding a penalty to darker skin color among immigrants provides information on the potential for assimilation of immigrants into the U.S. labor market. Whether and how rapidly immigrants assimilate into the U.S. labor market are issues of great policy importance and controversy.[3] Early work by Chiswick (1978) using 1970 Census data demonstrates that the earnings of white male immigrants rose rapidly with U.S. labor market experience and eventually exceeded the earnings of native-born workers. But studies analyzing cohorts after the 1970 s find a substantial wage gap (e.g., Borjas 1995). In part the wage gap arises from differences in skill levels, particularly education and English language proficiency.[4] The penalty to darker skin color indicates that the largest groups of post-1965 immigrants—those from Asia and Latin America—may have an additional source of disadvantage: darker skin

[3] For recent summaries and evidence on assimilation, see Card (2005) and Borjas (2006). Card's analysis shows that U.S. born children of immigrants have successfully assimilated, with education and wages higher than children of natives, while Borjas's analysis shows considerably slower assimilation.

[4] Also of debate is whether the gap in skill levels between immigrants and native born is increasing (e.g., Borjas 1995) or decreasing (e.g., Jasso, Rosenzweig, and Smith 2000). Different conclusions can result from inclusion or exclusion of undocumented immigrants and differences in the definition of a recent immigrant.

color relative to the majority U.S. population that seems to be penalized in the U.S. labor market. The results suggest that observed opposition to immigrants arises in part from discrimination as characterized by outward appearance, with immigrants who have lighter skin faring better than their counterparts who are darker.

References

Borjas, George J. (1995). Assimilation and changes in cohort quality revisited: What happened to immigrant earnings in the 1980 s? *Journal of Labor Economics,* 13(2), 201–245.

———. (2006). Making it in America: Social mobility in the immigrant population. *The Future of Children*: *Opportunity in America,* 16(2), 55–71.

Card, David. (2005). Is the new immigration really so bad? *Economic Journal,* 115(507), F300–F323.

Chiswick, Barry R. (1978). The effect of Americanization on the earnings of foreign-born men. *Journal of Political Economy,* 86(5), 897–921.

Hersch, Joni. (2006). Skin tone effects among African Americans: Perceptions and reality. *American Economic Review,* 96(2), 251–255.

———. (2008). Profiling the new immigrant worker: The effects of skin color and height. *Journal of Labor Economics,* 26(2), 345–386.

Hughes, Michael, & Hertel, Bradley R. (1990). The significance of color remains: A study of life chances, mate selection, and ethnic consciousness among Black Americans. *Social Forces,* 68(4), 1105–1120.

Jablonski, Nina G. (2006). *Skin: A natural history*. Berkeley & Los Angeles, CA: University of California Press.

Jablonski, Nina G., & Chaplin, George. (2000). The evolution of human skin coloration. *Journal of Human Evolution,* 39(1), 57–106.

Jasso, Guillermina, Massey, Douglas S., Rosenzweig, Mark R., & Smith, James P. (Forthcoming). The U.S. new immigrant survey: Overview and preliminary results based on the new-immigrant cohorts of 1996 and 2003. In Beverley Morgan & Ben Nicholson (Eds.), *Longitudinal surveys and cross-cultural survey design*. London (UK): Crown Publishing, UK Immigration Research and Statistics Service.

Jasso, Guillermina, Rosenzweig, Mark R., & Smith, James P. (2000). The changing skills of new immigrants to the United States: Recent trends and their determinants. In George Borjas (Ed.), *Issues in the economics of immigration* (pp. 185–225). Chicago, IL: University of Chicago Press & NBER.

Keith, Verna M. & Herring, Cedric. (1991). Skin tone and stratification in the Black community. *American Journal of Sociology,* 97(3), 760–778.

Massey, Douglas S. & Martin, Jennifer A. (2003). The NIS Skin Color Scale.

[NIS] New Immigrant Survey. (2003). http://nis.princeton.edu/overview.html. The data and documentation are available at http://nis.princeton.edu.