An Analysis of the Correlates of Discrimination Facing Young Hispanic Job-Seekers

By GENEVIEVE M. KENNEY AND DOUGLAS A. WISSOKER*

This study examines the extent and correlates of discrimination faced by young, accented, Hispanic males in Chicago and San Diego, using the outcomes of job applications by matched pairs of Anglo and Hispanic job-seekers. This is one of the first examples of audits being used in the labor-market area. The audit methodology provides a powerful basis for examining discriminatory hiring practices, because it permits direct comparison of hiring outcomes for pairs of Anglo and Hispanic job-seekers with similar labor-market qualifications.

In this paper, we first present differences in Anglo–Hispanic success rates in filing applications, obtaining interviews, and obtaining jobs. This builds on the descriptive analysis presented in Harry Cross et al. (1990). We then focus on the correlates of differential success in obtaining interviews and in subsequent job acquisition.

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I. The Audit Methodology

The data in this analysis derive from an Urban Institute study funded by the General Accounting Office of employment hiring practices governing Hispanic and Anglo job-seekers. Teams of matched Hispanic and Anglo males (called auditors) between the ages of 20 and 24 responded to a random sample of newspaper advertisements for entry-level positions. A total of 360 audits were conducted in Chicago and San Diego by eight pairs of auditors, four pairs in each city.

The auditors were recruited from college and university students in the Chicago and San Diego metropolitan areas. Ultimately eight auditors were selected in each city from a pool of approximately 50 applicants. The selection criteria included the ease of forming matched pairs, "credibility" as entry-level job-seekers, articulateness, and organizational skills. For the Hispanic auditors, additional requirements included being fluent in English and readily identifiable in appearance, speech, and name, as being of Hispanic descent. Formation of matched pairs was done on the basis of objective factors such as age, weight, height, work history, and education and more subjective factors such as personality and presentation. The pairs were matched first by site managers and then independently by the project director, the audit advisor, and two other researchers.

The auditors went through two and a half days of training, concentrated on getting a given pair of auditors to present themselves in a comparable way through practice: each auditor observed his teammate's behavior in mock interviews and then practiced behaving in a similar manner. Biographies were modified to make teammates as identically

TABLE 1—AUDITOR BIOGRAPHIES

Pair	Ethnicity	Birth year	Height	Years of college	Months of work experience	Jobs held	Highest (hourly) wage
Chicago:							
1	Hispanic	1965	5′11″	2	39	cook; interviewer	$5.15
	Anglo	1965	6′1″	1.5	40	waiter; office clerk	$5.25
2	Hispanic	1969	5′8″	3	18	customer service file clerk	$5.00
	Anglo	1968	5′8″	1	22	stocker; clerk	$4.25
3	Hispanic	1969	5′8″	1	20	stock clerk; sorter	$9.00
	Anglo	1967	6′2″	1	24	sorter; driver	$9.00
4	Hispanic	1966	5′5″	1	33	busboy; cashier	$5.00
	Anglo	1966	5′10″	2	23	cashier; busboy	$4.00–$5.00
San Diego:							
5	Hispanic	1965	5′8″	1	55	burger flipper; clerk	$5.50
	Anglo	1966	6′0″	3	44	waiter; clerk	$5.25
6	Hispanic	1967	5′9″	1	35	assembler; warehouse worker	$5.30
	Anglo	1966	5′8″	1	56	waiter; maintenance worker	$5.00
7	Hispanic	1967	6′2″	1.5	33	pizza maker; auto detailer; security guard	$5.25
	Anglo	1967	5′11″	1.5	24	veterinary assistant; food stocker	$5.00
8	Hispanic	1969	5′9″	1.5	18	busboy; weekend assistant manager, video store	$4.50
	Anglo	1967	5′10″	2	22	cook; waiter	$4.00 + tips

Note: The entries for "years of college" represent the number of years during which the individual attended college; apparent differences may not reflect cumulative differences because of part-time enrollment.

Sources: Cross et al. (1989) and internal Urban Institute documents.

qualified as possible. Education and work experience were adjusted to make the auditors plausible applicants for entry-level jobs.[1] The final auditor profiles were quite similar with regard to these objective characteristics (Table 1).

The audits are based on a random sample of low-skilled entry-level positions drawn from the help-wanted section of the Sunday editions of *The Chicago Tribune* and *The San Diego Union* on four consecutive weeks. When an advertisement listed multiple openings, the listing was given twice the chance of sample selection relative to listings with only one advertised position. Examples of jobs included in the sample are: bank tellers, restaurant counter help, hotel desk clerks, accounts-payable clerks, delivery persons, kitchen help, sales persons, and pool cleaners. For a detailed list of the positions that were eligible, see Cross et al. (1989) and Marc Bendick, Jr. (1989).

An audit began by having each member of the team respond to a help-wanted advertisement. For those advertisements requesting phone calls, team members made their calls within 30 minutes of each other. For advertisements requesting a personal visit by the applicant, the matched auditors scheduled their arrivals within 15–60 minutes of each other. Team members alternated in making the first call or visit to the employer. This meant that the presumed advantage of first contact with the firm was equal for the teammates. If neither member was allowed to file an application, the audit was dropped.[2]

[1]All of the auditors were college students who were overqualified for most of these entry-level positions. College students were chosen for the study because of the ease of recruiting them, their availability for full-time short-term employment in the summer, and because it was believed that they could handle the complex job of applying for up to 20 jobs in one week while accurately recording information on each one.

[2]In 11 cases, no application was required to obtain an interview. These audits were treated as valid audits.

TABLE 2—HISPANIC AND ANGLO PROBABILITIES OF SUCCESS AT EACH STAGE IN THE HIRING PROCESS

Stage	Number of audits	Both no	Both yes	Anglo yes, Hispanic no	Anglo no, Hispanic yes	Anglo success	Hispanic success
Application	360	0.031[a]	0.892	0.058	0.019	0.95	0.91
Interview[b]	360	0.286	0.439	0.214	0.061	0.65	0.50
Job offer	302[c]	0.497	0.205	0.222	0.076	0.43	0.28
Offer conditional on interview	140[d]	0.279	0.443	0.179	0.100	0.62	0.54

Notes: The differences between the Anglo and Hispanic percentages for the application, interview, and job-offer outcomes are significant at the 1-percent level. For the conditional-offer outcome, the difference is significantly different from zero at the 5-percent level.

Source: Based on Cross et al. (1990) and additional analysis of data from The Urban Institute/General Accounting Office Hispanic/Anglo Audit Study.

[a]In 11 audits, interviews were obtained without an application being filed.

[b]The variable measuring success at getting an interview includes 14 cases in which no interview preceded a job offer.

[c]Partially completed but valid audits are excluded from the job-offer outcomes (see text for details).

[d]The conditional-offer outcome is based on 140 audits in which both teammates received an interview.

After filing an application, auditors followed up with employers to try to obtain interviews and came in for interviews when requested to do so by employers. If the interview resulted in a job offer, the person offered the job turned it down immediately so that his audit partner would have an opportunity to be given an offer. Audits begun in the last week of the study were given 1–2 weeks to be completed. If one member of a team had completed an interview but the firm had not made a hiring decision by the end of the study, we classify the audit as truncated. In addition, approximately 5 percent of the audits were terminated after the interview stage because of unexpected circumstances, such as being asked to take a test or seeing a neighbor or friend who might reveal the nature of the audit study. The truncated and terminated audits provide information only for the application and interview outcomes, leaving 302 (or 85 percent) of the audits for the offer analysis. Immediately after each contact with an employer, auditors completed a survey describing the hiring process.

II. A Comparison of the Hiring Outcomes for the Hispanic and Anglo Auditors

Job outcomes are observed at three stages in the job hiring process: application, interview, and job offer.[3] The differences in success rates between Anglo and Hispanic teammates are used as an estimate of the extent of disadvantage facing young Hispanic men applying for entry-level positions.

At each stage, the Anglo auditor was significantly more likely than the Hispanic auditor to be successful (Table 2).[4] The Anglo auditors successfully filed applications in 95 percent of the audits, compared

[3]In 14 of the audits, the auditor did not receive a formal interview but still obtained a job offer. In eight of these cases it was the Hispanic auditor who obtained a job without an interview. All 14 cases were recoded as having received an interview. The multivariate results that are presented were compared to those in which the interview outcome was not recoded. The two sets of results lead to similar conclusions.

[4]For the application and offer outcomes, tests of significance were conducted using a variance formula that recognized the paired nature of the audit design. The intraclass correlation coefficient, which indicates the extent to which the total variance is attributable to variation in the outcomes across pairs, was very close to zero for all outcome measures (see Cross et al. [1990] for more details). For the interview and conditional-job-offer outcomes, the test of no difference was conducted within the context of the probit models discussed in Section IV. The significance levels were 1 percent or less for the application, interview, and unconditional-job-offer outcomes and 5 percent or less for the job-offer outcome conditional or having obtained an interview.

to a 91-percent success rate for the Hispanic auditors. Anglo job-seekers in the study obtained 30-percent more interviews (65 percent vs. 50 percent of the audits) and 52-percent more job offers (43 percent vs. 28 percent of the audits) with the audited firms, relative to their Hispanic counterparts.

A critical stage appears to be gaining an interview. Once Hispanics obtained an interview, they were still less likely than the Anglo auditors to receive an offer, but the conditional probabilities of receiving an offer were closer together than the unconditional probabilities. Among the pairs in which both auditors got interviews, the Anglo auditors received job offers 62 percent of the time, while the Hispanic auditors received job offers 54 percent of the time.

III. Robustness of the Findings

Unlike most social-science data-collection efforts, audit studies cannot rely on large sample sizes to ensure that misstatements by individual participants do not unduly effect the outcomes. In audit studies, a mismatched auditor pair or cheating by a pair could strongly influence the findings. A potential danger associated with the audit methodology for a sensitive issue such as discrimination is that the auditors may change their behavior or misreport outcomes to influence the study's results. The audit findings support the claim that the auditors behaved in an honest manner. The data show relatively little difference in the outcomes across pairs of auditors. If there were cheating or other bias by the auditors, it is unlikely that the results for each pair would be so similar. Second, much of the differential treatment occurred before the auditors had an interview. Individuals who were planning to cheat probably would have done so at the interview stage, where the auditor's behavior cannot be monitored as well as when trying to file applications or gain interviews, since these were often done over the telephone from the site manager's office.

The finding of differential rates of obtaining interviews for Anglos and Hispanics is supported by several alternative tests. The significance tests reported above are based on asymptotic tests of the difference between the probability of obtaining an interview for Anglos and Hispanics. To test the sensitivity of these findings, we test for Anglo–Hispanic differences for each pair using exact one-tailed tests based on the binomial distribution. For five of the eight pairs, the null hypothesis of no difference in treatment could be rejected at the 5-percent level or less. Pooling the data across pairs within each city leads to rejection of the null hypothesis at the 1-percent level or less. Additional evidence on the robustness of the interview outcomes comes from obtaining eight different asymptotic estimates by dropping out a different pair each time. In all cases, the differences between the Anglo and Hispanic interview outcomes were significant at the 1-percent level, using a one-tailed test.

A further test of symmetry of treatment is the sign test, suggested by James Heckman and Peter Siegelman (1993). For seven of the eight pairs, the Anglo was more successful at gaining interviews relative to his Hispanic counterpart, and for the eighth pair, the Anglo and Hispanic were equally successful. Under the null hypothesis of no difference in treatment, the estimated probability for the interview outcome, based on the sign test using the binomial distribution, is 0.035, showing strong evidence of differential treatment.

While the results for the interview outcome consistently point to an Anglo advantage, the conditional-job-offer results are less robust, reflecting smaller mean differences and smaller sample sizes. The sign test indicates less certainty of differences in treatment: in five of the eight pairs, the Anglo had proportionately more offers; in two of the remaining pairs, the Hispanic had proportionately more conditional job offers; in the final pair, the team members received equal numbers of offers. The estimated significance level under the null hypothesis is 36 percent. Moreover, four of the eight estimates obtained from dropping out one pair at a time were not statistically different from zero at the 5-percent level.

TABLE 3—MEANS OF EXPLANATORY VARIABLES

Variable	Mean
Interviewer Characteristics:[a]	
Hispanic faced a white interviewer	0.83
Anglo faced a white interviewer	0.86
Hispanic faced a male interviewer	0.68
Anglo faced a male interviewer	0.66
Occupation:[a]	
High/medium client contact[b]	0.68
High-status/white-collar[c]	0.28
Firm:[a]	
Service industry[d]	0.42
Retail industry[d]	0.45
National/regional[e]	0.36
Neighborhood characteristics:[f]	
Proportion white	75.03
Proportion Hispanic	12.41
Mean income level	17.93
Control Variables:[a]	
Anglo initiates contact	0.49
Multiple positions advertised	0.66
Audit occurred in Chicago	0.47

Note: The interviewer variables are defined for the pairs of auditors who both received interviews, while the other variables pertain to all 360 audits.

[a]Data from 1989 Urban Institute/GAO Hispanic/Anglo Hiring Audit.

[b]Degree of contact with the public was coded based on occupation, information from the advertisements, and where necessary, phone calls to the firms.

[c]Management, technical, and office jobs were considered high-status/white-collar occupations.

[d]The excluded category contains firms in construction, manufactures, and wholesale trade.

[e]This variable takes the value 1 if the firm has locations outside of the state and is 0 otherwise.

[f]The 1989 census tract data were estimated by National Decision Systems, Encinitas, California.

IV. Analysis of the Correlates of Discrimination

The guide for the analysis of the correlates of differential hiring outcomes is the economics literature on wage discrimination (see e.g., Glen Cain, 1986; Gary Becker, 1971; Kenneth Arrow, 1973.) Here we assume that the same factors that affect wage differentials may be observed to affect hiring decisions. We focus on client and employer prejudice as explanations for discrimination. We expect that the Hispanic auditors will receive worse treatment than their Anglo counterparts in occupations with high client contact and in neighborhoods with proportionately fewer Hispanics and higher incomes. We also expect that firms with locations across state lines will have more favorable treatment toward Hispanics relative to local firms because they are more likely to have affirmative-action policies or to be governed by national statutes affecting hiring practices. Table 3 contains the means of the explanatory variables included in the analysis.

We estimate two sets of bivariate probit models: one model describes the probability that an employer provides an interview to each team member, and the second describes the probability that the employer makes a job offer to the individual, conditional on receipt of an interview. In the interview equation, we model y_{ij}^*, the propensity of firm i to grant an interview to auditor j. This propensity depends upon observable characteristics such as type of job and area market characteristics.[5] To permit a focus on ethnicity, we allow an interaction between whether the applicant is Hispanic and the full set of occupation, firm, and area characteristics. This can be written as:

$$y_{ij}^* = (1 - H_j)\mathbf{x}_i'\mathbf{b} + H_j\mathbf{x}_i'\mathbf{g} + d_i + e_{ij}$$

$$= \mathbf{x}_i'\mathbf{b} + H_j\mathbf{x}_i'(\mathbf{g} - \mathbf{b}) + d_i + e_{ij} \qquad j = 1,2$$

where $\mathbf{x}_i$ measures the characteristics of firm/job i and the tract in which the firm is located and H_j marks whether the individual auditor is Hispanic. The parameter vector $\mathbf{g}$ measures the effect of the characteristics on the propensity of the firm to grant an interview to Hispanics, $\mathbf{b}$ measures the comparable effect for Anglos, and $(\mathbf{g} - \mathbf{b})$ represents the differential effect.

[5]Individual characteristics such as age, education, and experience are already incorporated into the model by the selection of male auditors with similar labor-market characteristics, all between the ages of 20 and 24.

The model incorporates two disturbances: d_i, which is firm-specific, and e_{ij}, which is specific to individual j applying for a job at firm i. Both components are assumed to be normally distributed and uncorrelated with the observed characteristics of the job and the local area. The firm-specific effect represents the common circumstances faced by individuals applying for the same job with similar résumés.[6]

This model, which incorporates correlation across pairs applying for the same job, is based on two assumptions. First, we assume that the element of the disturbance that affects the outcomes for both auditors is uncorrelated with the other characteristics of the firm.[7] Second, we assume that the firm-specific component captures all correlation between members of a pair (i.e., the outcomes for the same auditor are not correlated across audits).[8] The conditional probability of a job offer is estimated using data on the pairs of auditors who obtained interviews.

V. Probability of Obtaining an Interview

The bivariate probit results for outcomes at the interview stage are presented in Table 4. The estimated correlation between the two outcomes from a given audit is positive (0.72) and highly significant. The X^2 statistic of 14.2, which is significant at the 16-percent level, was obtained for a log-likelihood test comparing the model in Table 4 to a model in which all coefficients but the constant and the variable signifying who initiated contact were constrained to be the same for Anglo and Hispanic auditors. This indicates very weak support for a systematic variation in the Anglos' greater success in receiving interviews relative to their Hispanic counterparts.[9] Also, very few of the coefficients are significant at the conventional 1- or 5-percent levels.[10] In our discussion, we focus on variables of interest.

Other things equal, the Anglo auditors were more likely to obtain interviews than the Hispanic auditors in higher- versus lower-income neighborhoods. Income could be correlated with client preferences for Anglos over Hispanics. It could also be proxying an unobserved characteristic about the firm or applicant pool that affects the firm's hiring decisions.

There is very little support for the hypothesis that the extent of customer contact is related to whether the Anglo rather than the Hispanic obtains an interview. Hispanic auditors were only slightly less successful than the Anglo auditors when seeking the occupations with a high or medium degree of contact with the public relative to occu-

[6]For example, a larger number of applications for a position may be associated with a lower probability of an interview for both auditors. Alternatively, a job that has gone unfilled for longer than the employer desires may lead to relaxed hiring standards. Furthermore, because the pairs of auditors were given similar résumés, we would expect them to be comparably suited for the job: in other words, they will tend to be overqualified or underqualified for the same job.

[7]If the firm-specific effect measures the applicant pool for a job, this assumption is unlikely to hold, since jobs that are more attractive are also likely to attract more and better applicants. If the firm-specific effect instead measures the employer's need to fill the job quickly, this is likely to be uncorrelated with any of the observed characteristics of the job.

[8]We tested the appropriateness of this assumption by estimating fully interactive models with and without dummy variables marking each pair. The standard errors of the coefficients and the coefficient values were changed only slightly upon incorporating the pair-specific dummies. This suggests that a full random-effects specification will likely result in standard errors similar to those reported here.

[9]This should not be interpreted as lack of differential treatment of Anglos and Hispanics. By evaluating the estimated coefficients at the sample means we obtain a predicted difference in treatment identical to the difference in proportions reported in Table 1.

[10]To examine whether the lack of significant findings resulted from high levels of multicollinearity in the data, we also estimated models with more parsimonious specifications. For example, we estimated a model including only the control for which auditor applied first, the measure of public contact, the ethnic and racial makeup of the tract, and an interaction involving these variables. Even in these simple models, we found few individual coefficients to be statistically significant.

TABLE 4—PROBIT RESULTS FOR THE PROBABILITY OF RECEIVING A JOB INTERVIEW

Independent variable	Hispanic	Anglo	Difference
Occupation:			
High/medium client contact	−0.3040	−0.1740	−0.1299
	(0.157)	(0.171)	(0.181)
High-status/white-collar	−0.3258	−0.5455	0.2197
	(0.166)	(0.177)	(0.193)
Firm:			
Service industry	−0.1806	−0.2284	0.0478
	(0.230)	(0.239)	(0.241)
Retail industry	0.0005	0.0329	−0.0324
	(0.236)	(0.241)	(0.248)
National/regional	−0.2517	−0.2957	0.0440
	(0.148)	(0.147)	(0.160)
Neighborhood characteristics:			
Proportion white	0.0133	0.0055	0.0078
	(0.0069)	(0.0061)	(0.0065)
Proportion Hispanic	0.0116	0.0035	0.0081
	(0.0094)	(0.0065)	(0.0091)
Mean income level	−0.018	0.0024	−0.0205
	(0.0097)	(0.0096)	(0.012)
Control variables:			
Anglo initiates contact	−0.1796	0.1765	−0.3561
	(0.139)	(0.145)	(0.153)
Multiple positions advertised	0.2438	0.0086	0.2353
	(0.155)	(0.159)	(0.175)
Audit occurred in Chicago	0.2519	0.3104	−0.0585
	(0.171)	(0.173)	(0.198)
Intercept	−0.5489	0.1418	−0.6907
	(0.643)	(0.548)	(0.594)
Log-likelihood = −413.3			
N = 360 audits			
Firm-specific correlation = 0.72 (SE = 0.06)			

Note: Standard errors are given in parentheses.

pations with a low degree of contact with the public.[11]

VI. Conditional-Job-Offer Outcomes

Table 5 gives the results from the probit estimation of the conditional-job-offer outcomes. The estimated degree of correlation is again positive, at 0.62, and highly significant. The likelihood-ratio test produced a X^2 statistic of 12.2 which is only significant at the 43-percent level. This indicates that the set of regressors has the same effect for Anglos and Hispanics on the probability of obtaining a job, indicating that differential treatment is not systematically related to these explanatory variables.

The results indicate that differences in Hispanic–Anglo conditional-job-offer outcomes depend on the scope of the firm and the sex of the interviewer. Other things equal, the Hispanic auditors had reduced chances of receiving job offers relative to those of the Anglo auditors when firms are strictly local and when auditors faced a male

[11]One critique of the audit design is that, because all the Hispanic auditors have accents, what we construe as discrimination against Hispanics is in fact refusal to hire individuals with accents. If there were a relationship between contact with the public and differential treatment, one could argue that the difference in treatment results from concern over communication with clients. However, our data show little evidence of a relationship between client contact and differential treatment.

TABLE 5—PROBIT RESULTS FOR THE PROBABILITY OF RECEIVING A JOB OFFER CONDITIONAL ON GETTING AN INTERVIEW

Independent variable	Hispanic	Anglo	Difference
Interviewer:			
White	0.0918	−0.4056	0.4974
	(0.324)	(0.450)	(0.573)
Male	−0.1492	0.4558	−0.6051
	(0.309)	(0.296)	(0.381)
Occupation:			
High/medium client contact	0.3370	0.0761	0.2609
	(0.280)	(0.274)	(0.359)
High-status/white-collar	−0.3104	−0.2027	−0.1078
	(0.360)	(0.371)	(0.524)
Firm:			
Service industry	0.3680	−0.1731	0.5410
	(0.460)	(0.507)	(0.552)
Retail industry	0.1101	−0.1013	0.2114
	(0.433)	(0.478)	(0.510)
National/regional	−0.0320	−0.4558	0.4238
	(0.292)	(0.279)	(0.340)
Neighborhood characteristics:			
Proportion white	0.0099	0.0035	0.0064
	(0.015)	(0.017)	(0.020)
Proportion Hispanic	0.0044	0.0099	−0.0055
	(0.019)	(0.024)	(0.032)
Mean income level	−0.0098	0.0074	−0.0172
	(0.019)	(0.017)	(0.019)
Control variables:			
Anglo initiates contact	−0.5794	−0.4532	−0.1262
	(0.259)	(0.265)	(0.308)
Multiple positions advertised	0.9394	0.7978	0.1417
	(0.302)	(0.294)	(0.330)
Audit occurred in Chicago	−0.1949	−0.0401	−0.1548
	(0.299)	(0.304)	(0.366)
Intercept	−1.071	−0.1806	−0.8901
	(1.52)	(1.69)	(2.15)

Log-likelihood = −154.9
N = 140 audits in which both teammates received an interview
Firm-specific correlation = 0.62 (SE = 0.12)

Note: Standard errors are given in parentheses.

interviewer. Hispanics may do relatively worse when applying at local firms because these firms lack affirmative-action policies or are less likely to be bound by federal statutes governing hiring practices. The fact that the Hispanic auditors are relatively less successful when facing male interviewers may reflect greater prejudice on the part of men, as has been suggested in previous research (John Yinger, 1986).

The estimates show no relationship between the extent of client contact and the relative probability that Anglos and Hispanics obtain jobs after receiving an interview. As with the interview results, this finding is at odds with explanations for hiring discrim-

ination that rely on customer preference for Anglos as a reason for why employers would be less willing to interview and hire Hispanics in jobs that entail a high degree of contact with the public.

VII. Implications for Future Analysis

The results reported here, using audit data that provide a clearly appropriate measure of differential hiring outcomes, show strong evidence of differential treatment between Anglo and Hispanic entry-level jobseekers in two cities. The Hispanic auditors were significantly less likely than their Anglo counterparts (i) to be given a positive response when they made a request to file an application, (ii) to obtain job interviews, and (iii) to be offered a job. Even conditional upon receiving an interview, they were less likely to obtain a job than their Anglo counterparts.

The next step is to see whether broader studies confirm these findings. Since the credibility of findings from audit studies hinges on how well matched the pairs of auditors were and on the integrity of auditor behavior, these future studies should pay even more attention to the matching process than was done in this study. Potential auditors should be drawn from larger applicant pools, and prospective employers (offering typical eligible jobs) should be involved in selecting and verifying the matched pairs. In addition, to ensure that discrimination is measured conservatively, the minority auditor should be better qualified than the majority auditor in measurable characteristics; and these characteristics should be expanded to include the results of tests measuring aptitude, oral communication skills, and motivational level. Finally, the risk of cheating could be further reduced by selective monitoring of some audits, informing auditors that some of their audits will be monitored, or through the use of incentive payments for successful outcomes.

No strong correlates of discrimination for either the interview or conditional-job-offer outcomes emerged from our probit estimation. The reason could be the small and limited nature of the data set. But it could also be that the complexity of the job hiring process is insufficiently understood, that the roots of discriminatory practices need further investigation, or that current theories of employment discrimination are inadequate.

Since the overall evidence of discrimination is strong, however, the next step is to pursue analysis of possible correlates further. Two alternative approaches are promising. The first is to employ a stratified audit design. Potential stratifying variables include firm size, minority ownership, and extent of contact with the public. Stratification would permit more powerful tests of the relationship between differential treatment and these factors. The second alternative would be to link the audits with surveys of either the firms offering the jobs for which the auditors try to apply or similar firms in the same sites as the audit study. In addition to providing much richer data on the covariates explored in this study, a linked audit–survey design would permit analysis of the effects of variables such as size of applicant pool, extent of unionization, and whether the firm is subject to affirmative-action laws.

The results of this study strongly suggest that discrimination in hiring exists, but that we need to learn more about the circumstances surrounding differential treatment. Greater understanding of the patterns of discriminatory treatment and the circumstances under which its likelihood increases is crucial to provide guidance on where to target civil-rights enforcement efforts.

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