

NOTES ON DEFENDING A CLASS ACTION SUIT

1. Dr Smith has written an expert report on this case. His main finding is that, after conditioning on gender, age, EEO category of job and year, an application submitted by an African American is less likely to be successful than an application submitted by a Caucasian. “Logit results therefore provide strong statistical evidence indicating black applicants are disfavored, relative to whites who are otherwise similar in terms of the factors considered in these analyses”. He concludes that at each step of the hiring/promotion process black applications “have been sizably and statistically disadvantaged relative to white applications”.

Steps in the Hiring/Promoting Process

2. Filling a position in the Company consists of successfully completing several steps:
 - a. **Application:** Only people submitting an application are eligible for the advertised position.
 - b. **Referral:** All applications not meeting minimal qualifications for the job are rejected.
 - c. **Interview:** A subset of the applicants submitting referred applications are interviewed.
 - d. **Offer:** One (or more) of the interviewed candidates is offered the advertised position.

3. There are practical reasons for analyzing separately the elements of the hiring process. The steps briefly described above involve very different activities. Before a person can be hired, they must apply for the job, a decision that is not taken by the Company. The first step only involves a search firm, *Professional Recruitment Plus Services*, screening applications, and culling those that do not meet the minimal qualifications for that job classification. At the third step there is significant interaction between the applicants and those charged with making or recommending job offers.

4. After a position has been advertised, these three steps exhaustively describe the Company’s role in the hiring process, in both a mathematical and a common sense way. Given the number of applications made by a person, the probability of being hired at one of the jobs applied for is the multiplicative product of the probabilities of:
 - a. at least one application of the person is referred;
 - b. receiving at least one interview if one or more of the applications is referred;
 - c. of being hired to one of the interviewed positions if he or she is interviewed at all.

5. Another useful way of summarizing success at the second and third steps is to estimate the expected number of:
 - a. referred applications per applicant;
 - b. interviews received by an applicant who has at least one of his or her applications referred.

6. The law provides that in disparate impact cases, unless “the complaining party can demonstrate to the court that the elements of a respondent’s decision making process are not capable of separation for analysis” that it should not be analyzed as one employment practice but rather that the elements should be analyzed separately; See Title 7 of the Statute on Disparate Impact, 42 U.S.A. # 2000e-2, Burden of proof in disparate impact cases, Item (k) (1) B(i).

People take a variety of approaches to job search

7. Consider the beginning of the job search process by a person, applying for one or more positions. Dr. Smith focuses exclusively on applications, not applicants. Yet the case is about the treatment of people, not forms, and there is no reason to believe that people in different groups approach the job search process in the same way.

8. The data used by Dr. Smith show that African Americans are more likely to apply for jobs than whites. Although they form 2% of the Company workforce in 2010, they provided more than 4% of the applications to the Company in 2008 through 2010. This sizeable difference shows that per person seeking employment suggests that at least one of two factors is operating: either African Americans apply to more positions in general (that is to all employers) than Caucasians, and/or African Americans are more attracted to working for the Company than Caucasians and hence focus their job search on that institution. Irrespective of which factor is more important, it seems clear that African Americans pursue a different mix of job search strategies to Caucasians.

9. Racial differences in approach to the job search process are also evident at other steps in the hiring process. The Company data gives three categories why referred candidates, those holding at least minimal qualifications for the job classification, do not progress to the interview stage because of their own individual choices. The categories are “Failed to Respond to Dept”, “Applicant Not Interested - Dept” and “Resume Not Submitted”. Are African Americans more likely than Caucasians to submit applications that terminate in one of these three categories?

10. I ran a logit model on the database for all referred applications in which the dependent variable is an indicator variable that lists one of these three categories. The independent variables include controls for age, education, experience in the Company, department advertising the position, as well as race. I found that the race coefficient is significant, and estimate that black applications are over 20% more likely to terminate in one of those three categories. The coefficient value is 0.16, has estimated standard error of 0.01. The estimate translates to a probability of 16% for blacks, or 3% higher than the 13% we find for comparable whites. To be more explicit, the 13% is found by switching the race indicator variable from “black” to “white” and then averaging over the “black” population.

11. Thus Dr. Smith ignores the manifest evidence that as a group African Americans take a different approach to job search than Caucasians. To evaluate how successful blacks are in securing a job, and to evaluate a hiring system, the analyst should account for these behavioral differences. Note that I am not taking a position on which of the following two job search strategies, each taking an equal amount of time and effort in total, is more effective:

- a. A targeting approach: spend lots of time reviewing each job description before filing a small number of applications;
- b. A shotgun approach: spend less time reviewing job descriptions and file a larger number of applications.

Failing to meet minimal qualifications

12. The data Dr. Smith provide in his report show that applications submitted by African Americans are less likely to meet the minimal qualifications of the job classification than those submitted by Caucasians.

13. This evidence alone does not imply that the hiring system administered by the Company is having a disparate impact on African Americans. Paraphrasing 42 U.S.C.A. # 2000e-2, an unlawful employment practice based on disparate impact is established only if the respondent fails to demonstrate that the challenged practice is job related for the position in question and consistent with business necessity.

14. When a vacancy arises, the minimal job qualifications are stated for the designated job classification for all applicants to read, regardless of their race. I could not find any evidence in the report submitted by Dr. Smith questioning or challenging:

- a. the criteria used to determine the minimal requirements for each job classification;
- b. whether the Company fully applies the minimal requirements without regards to race.

15. Nevertheless Dr. Smith concludes that “at [this] stage of the hiring process “black applications have been sizably and statistically disadvantaged relative to white applications.” Dr. Smith draws this conclusion without providing evidence that the “minimal qualifications” for a job classification are actually ancillary and unrelated to the job’s duties, in which case the stage from application to referral would be subject to the provisions referred to in Paragraph 13.

16. There is a plausible interpretation of how African Americans and Caucasians differ in their approach to job search. As a working hypothesis, and loosely put, it appears as if blacks take more of a shotgun approach, whereas whites tend to be more targeted. The Company accommodates these behavioral differences:

- a. People are not deterred from filing for any number of applications; the process is web based; it is open to anyone inside or outside the service; there are no fees or institutional barriers.
- b. Dr. Smith does not draw upon any evidence in his report that suggests the minimal qualification barrier are doing anything more than culling those applications for which the applicant has indicated that he or she is not skilled for the particular job classification.

Step 1: Application – to – Referral

17. On average an African American applicant applied for 5.9 positions whereas an average Caucasian applicant applied for 4.3 positions. The difference of 1.6 is not affected by controlling for gender, age, education, employment and tenure with the Company in my linear regression. (The t statistic is 8.6.)

18. I estimated the probability that an application from an African American had a 78.7% chance of being referred, compared to an 82.8% chance for a comparable Caucasian. The 4.1% difference is derived from a negative coefficient on the race indicator variable that is highly significant.

19. Thus African American applicants submit a greater number of applications, but each application they submit has a slightly lower chance of reaching the next step in the hiring process. Controlling for education, age and gender, black applicants had 0.98 more referrals than similar whites, and the difference is highly significant. I also estimated the probability that applicant would have at least one referral, and here we found there is no significant difference between the races. The estimated coefficient value is -0.002 with estimated standard error 0.030.

20. The main finding from this statistical analysis is as follows: even if all the minimal qualifications are inappropriately matched to the job classification, and consequently none of them should be treated as legitimate factors for discriminating between job applications, the first step of the process, from application to referral, does not have a disparate impact on African Americans relative to Caucasians.

Step 3: Interview – to – Hire

21. Focusing first on how each application fares beyond the interview stage, I find the probability of the application belonging to the hired person does not significantly differ by race, 18.2% for blacks versus 18.3% for comparable whites. (The estimated coefficient value is -0.006, the estimated standard error 0.036.)

22. Controlling for education, age, and gender, there is no statistically significant difference between the probabilities that a black versus white applicant is hired at one of the jobs to which he/she applies conditional on having at least one interview. (The estimated coefficient value is 0.0026, and has an estimated standard error of 0.045398.)

23. The findings from this statistical analysis show that the third step of the process, from interview to hire, does not have a disparate impact on African Americans relative to Caucasians.

Step 2: Referral – to – Interview

24. As in the other two hiring steps, I analyzed evidence for disparate impact by race in applications, and also by applicant. When conducting this analysis I found that some positions attracted many more referred applications than others, and that some positions lead to multiple hires. I constructed a new variable for each position, defined as the total number of hires for that job divided by the total number of referrals, the hire rate per referral. This is a measure of the (inverse) demand for a given position; the lower the hire rate, the more attractive the position.

25. Averaging the hire rate over the applications for each applicant, I constructed an applicant specific measure of how much competition other applicants provided for the jobs he or she was referred to. I find that on average African Americans are referred to positions with lower hire rates than Caucasians.

Applications

26. I ran a logit that does not differentiate between departments with regards to race. In this case we find that there is a significant difference between the probabilities that a black versus a white application will progress from the referral to the interview stage; 17.6% of the white applications are passed on to the interview stage whereas only 14.0% of black applications make the cut. (The estimated coefficient on the logit is -0.169 with estimated standard error 0.0155.)

27. I also found that the proportion of referred applications that are culled from the next (interview) stage varies by department. For this reason I repeated the analysis to see whether there the disparate impact on race is uniform across the various departments or not. To conduct this analysis we first identified those departments with less than two hundred referred applications and where possible grouped them within their general category.

28. I estimated this logit for the different departments with their standard errors. Of the 15 departments, 5 have significant negative coefficients on the race variable indicator, showing that referred black applications have a lower probability of making the interview stage in those

departments. The coefficients on the remaining 10 departments are not significant. These results show there are significant differences between the departments.

Applicants

29. African American applicants have more of their applications referred than comparable Caucasians. Yet in one third of the departments, referred applications from African Americans are statistically significantly less likely to be selected for the interview stage. How is that possible?

30. Conditional on being referred, the expected number of interviews an African American receives is 0.035 higher than the expected number a Caucasian receives, but the difference is not statistically significant.

31. Conditional on being referred, the probability that an African American receives at least one interview is 34.3% which compares with 38.0% for a comparable Caucasian, a statistically significant difference with a p value of approximately zero. (The estimated coefficient, -0.1089, has estimated standard error 0.0027.)

32. Summarizing, as a group and conditional on referral, blacks are little more likely than whites to receive multiple interviews, a little more likely to receive no interviews, but on average receive about the same number. The differences are, however, quantitatively quite small, and further analysis would be required to reach a more definitive conclusion.