

RACIAL PREFERENCES IN COLLEGE ADMISSIONS

By

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Abstract

We develop a simple model comprised of three classes of college admissions—merit, race and legacy—to show that a change in admissions policy that reduces racial preferences can lead to a “less-able” student body. In fact, the change in admissions policy may serve only to ensure that more admissions are available for “sale” to wealthy alumni through legacy preferences.

1. Introduction

In two recent landmark cases involving the University of Michigan, the U.S. Supreme Court affirmed that colleges may employ narrowly-tailored, race-based admissions policies if they contribute to the diversity of the student body. The Court indicated that it was primarily concerned with *diversity of experience* rather than *diversity of color*.¹ The Court’s decisions satisfied neither side of the political spectrum—liberals contending that colleges should have broad discretion over admissions in order to enhance the overall educational experience of their students, conservatives contending that such preferences necessarily produce a “less-able” student body.

What is frequently overlooked in this debate is the fact that racial preferences represent only one of several types of preferences that prestigious colleges regularly employ in selecting their student bodies. Other types of preferences include those for talented athletes and the offspring of wealthy alumni, so-called legacy preferences. To date, there has been no serious challenge to these other types of preferences.² This is curious because eliminating one type of preference—say racial preferences—while retaining other types of preferences could well produce a “less-able” student body. This can occur, for example, if (i) the average ability of the students admitted under racial

¹ The Court observed that “Enrolling a ‘critical mass’ of minority students simply to assure some specific percentage of a particular group merely because of its race or ethnic origin would be patently unconstitutional.” *Gutter v. Bollinger et. al.* (2003, p. 3).

² Recently, President Bush called for an end to legacy preferences in college admissions. See Goldstein (2004).

preferences exceeds that of the new group of students admitted under some other preference; or (ii) the average ability within the admissions subset decreases rapidly as the proportion of admissions drawn from that subset increases.

The format for the remainder of this paper is as follows. Section 2 formally derives sufficient conditions for the elimination of racial preferences to produce a “less-able” student body. The conclusions and policy implications are discussed in Section 3.

2. Formal Analysis

In this section, we formally derive sufficient conditions for the elimination of racial preferences and the retention of legacy preferences to result in a “less-able” student body.

A. Assumptions and Definitions

Suppose that there are Z applicants for N available admissions, where $N < Z$. The ability level of each applicant q is denoted by S_q , where $q = 1, \dots, Z$. The set of students applying for admission, $\{S\}$, can be partitioned into subsets $\{S^r\}$, $\{S^l\}$ and $\{S^n\}$, where the superscripts r , l and n indicate, respectively, that the student is an under-represented, race-based minority,³ alumni offspring, or neither.

Assumption 1. (Well-Ordering) The applicants for admission can be rank-ordered in descending order of ability level, $\{S_1, \dots, S_N, \dots, S_Z\}$.

Assumption 2. The set of rank-ordered admissions, $\{A\}$, can be partitioned into subsets of merit admissions, $\{A^m\}$, racial-preference admissions, $\{A^r\}$, and legacy-preference admissions, $\{A^l\}$.

Definition 1. A preference-free admissions set is given by $\{A\} = \{S_1, \dots, S_N\}$.

Definition 2. A merit admission is the admission A_i^m of any $S_i \geq S_N$.

³ These include Blacks, Hispanics and Native Americans.

Definition 3. A racial-preference admission is the admission A_j^r of any $S_t^r < S_N$.

Definition 4. A legacy-preference admission is the admission A_k^l of any $S_t^l < S_N$.

Assumption 3. (Continuity) $d(A_t^s, A_{t+1}^s) = |A_t^s - A_{t+1}^s| \rightarrow 0 \forall s = m, r, l; t = i, j, k$.⁴

Assumption 4. The order of admissions within any subset, $\{A^m\}, \{A^r\}, \{A^l\}$, proceeds sequentially in decreasing rank-order from “most-able” to “least-able.”⁵

In the benchmark case, the average ability of the student body is given by

$$(1) \bar{A} = \left[\sum_{i=1}^{N^m} A_i^m + \sum_{j=1}^{N^r} A_j^r + \sum_{k=1}^{N^l} A_k^l \right] / N = s_m \bar{A}^m + s_r \bar{A}^r + s_l \bar{A}^l,$$

where $N^m + N^r + N^l = N$, and $s_s = N^s / N, s = m, r, l$ is the share of each of the three

groups represented in the set of N admissions and $\bar{A}^s = \sum_{t=1}^{N^s} A_t^s / N^s, s = m, r, l; t = i, j, k$ is

the average ability level within the admissions subset. By *Definitions 2-4*, $\bar{A}^m > \bar{A}^r$ and

$\bar{A}^m > \bar{A}^l$, respectively.

Definition 5. An admissions policy consists of a three-tuple of admission shares $\{s_m, s_r, s_l\}$, with $0 \leq s_s \leq 1$ and $\sum s_s = 1$, for $s = m, r$ and l .

Definition 6. Let $\varepsilon_s = \frac{\partial \bar{A}^s}{\partial s_s} \frac{s_s}{\bar{A}^s} \leq 0, s = m, r$ and l define the average-ability elasticities.

⁴ This assumption essentially says that the difference in ability between any two adjacent admissions in any well-ordered admissions subset is “small.”

⁵ As Loury (2002, p. 132) observes, “Selective institutions will naturally try to reject the least qualified of the otherwise admissible nonblack applicants while admitting the most qualified of those black applicants who would otherwise have been rejected.”

B. Key Findings

Consider now a “small” change in the admissions policy that allows for a reduction in the share of racial preference admissions ($ds_r < 0$) and an offsetting increase in the shares of merit and legacy preference admissions ($ds_m + ds_l > 0$). This implies that

$$(2) \quad ds_m + ds_r + ds_l = 0.$$

Proposition 1. The change in admissions policy leads to a “less-able” student body when

$$(3) \quad \frac{\bar{A}^m (1 + \varepsilon_m^-) ds_m + \bar{A}^l (1 + \varepsilon_l^-) ds_l}{(ds_m + ds_l)(1 + \varepsilon_r^-)} < \bar{A}^r.$$

Proof: Taking the total differential of (1) implies that

$$(4) \quad d\bar{A} = (\bar{A}^m + s_m \frac{\partial \bar{A}^m}{\partial s_m}) ds_m + (\bar{A}^r + s_r \frac{\partial \bar{A}^r}{\partial s_r}) ds_r + (\bar{A}^l + s_l \frac{\partial \bar{A}^l}{\partial s_l}) ds_l.$$

$ds_r = -(ds_m + ds_l)$ follows from (2). Substitution yields

$$(5) \quad d\bar{A} = (\bar{A}^m + s_m \frac{\partial \bar{A}^m}{\partial s_m}) ds_m - (\bar{A}^r + s_r \frac{\partial \bar{A}^r}{\partial s_r})(ds_m + ds_l) + (\bar{A}^l + s_l \frac{\partial \bar{A}^l}{\partial s_l}) ds_l.$$

Setting $d\bar{A} < 0$ in (5) and appealing to *Definition 6* yields

$$(6) \quad \bar{A}^m (1 + \varepsilon_m^-) ds_m - \bar{A}^r (1 + \varepsilon_r^-)(ds_m + ds_l) + \bar{A}^l (1 + \varepsilon_l^-) ds_l < 0.$$

Solving for \bar{A}^r in (6) yields the result in (3). ■

Proposition 1 establishes a lower-bound for \bar{A}^r sufficient for the change in education policy to lead to a “less-able” student body.

Lemma 1. The change in admissions policy leads to a “more-able” student body when $ds_l = 0$.

Proof: When $ds_l = 0$, (4) reduces to

$$(7) \quad d\bar{A} = (\bar{A}^m + s_m \frac{\partial \bar{A}^m}{\partial s_m}) - (\bar{A}^r + s_r \frac{\partial \bar{A}^r}{\partial s_r}).$$

Let $s_m = 1 - s_r - s_l$, then

$$(8) \quad d\bar{A} = \bar{A}^m + (1 - s_r - s_l) \frac{\partial \bar{A}^m}{\partial s_m} - \bar{A}^r - s_r \frac{\partial \bar{A}^r}{\partial s_r},$$

or

$$(9) \quad d\bar{A} = (\bar{A}^m + \frac{\partial \bar{A}^m}{\partial s_m} - \bar{A}^r) - (s_r + s_l) \frac{\partial \bar{A}^m}{\partial s_m} - s_r \frac{\partial \bar{A}^r}{\partial s_r}.$$

The second and third terms on the right-hand side of (9) are non-negative. Also, since

$\bar{A}^m > \bar{A}^r$ and $A_i^m > A_j^r$ for all i and j , $\bar{A}^m + \frac{\partial \bar{A}^m}{\partial s_m} > \bar{A}^r$, so the first term on the right-hand

side of (9) is positive. It follows that $d\bar{A} > 0$. ■

Because the ability of each additional merit admission exceeds the ability of each displaced racial-preference admission, the change in admissions policy necessarily leads to a “more-able” student body.

Lemma 2. The change in admissions policy when $ds_m = 0$ leads to a “less-able” student body whenever:

a) $\bar{A}^l < \bar{A}^r$ and $|\varepsilon_i| \approx |\varepsilon_r^-|$; or

b) $\bar{A}^l \approx \bar{A}^r$ and $|\varepsilon_i| > |\varepsilon_r^-|$.

Proof: Under the conditions stated in the proposition, (3) reduces to

$$(10) \quad \bar{A}_l(1 + \varepsilon_i) < \bar{A}_r(1 + \varepsilon_r^-).$$

Equation (10) is satisfied if either condition a) or condition b) holds. ■

The change in admissions policy leads to a “less-able” student body if (i) the average ability of legacy-preference admissions is lower than that of racial-preference admissions

and the average ability across the two admissions subsets changes at a comparable rate; or (ii) the average ability levels are comparable across the two admissions subsets, but the average ability level of legacy-preference admissions decreases at a faster rate than that of racial-preference admissions.⁶

Proposition 2. There exists a change in admissions policy of the form $ds_r < 0, ds_m > 0, ds_l > 0$ and $ds_m + ds_r + ds_l = 0$ that leads to a “less-able” student body whenever:

a) $\bar{A}^l < \bar{A}^r$ and $|\varepsilon_l| \approx |\varepsilon_r|$; or

b) $\bar{A}^l \approx \bar{A}^r$ and $|\varepsilon_l| > |\varepsilon_r|$.

Proof: By *Lemma 1*, the change in admissions policy leads unequivocally to a “more-able” student body when $ds_l = 0$. By *Lemma 2*, the change in admissions policy leads to a “less-able” student body when condition a) or condition b) holds. By continuity of ability within the admissions subsets (*Assumption 3*), there must exist a change in admissions policy of the form $ds_r < 0, ds_m > 0, ds_l > 0$ and $ds_m + ds_r + ds_l = 0$ that leads to a “less-able” student body. ■

3. Conclusions

Thomas Paine observed more than 200 years ago that “virtue is not hereditary” (Paine, 1776, p. 54). It is apparent that at least in some cases ability is not hereditary either. This has given rise to so-called legacy preferences whereby wealthy alumni are essentially able to “buy” admissions for their less-able offspring. To date, legacy preferences have attracted relatively little attention as the focus has been on racial preferences and recent court decisions circumscribing its use.

⁶ Note that if university admissions officers can be “bribed” to violate *Assumption 4*, ε_l will increase in absolute value and the sufficient conditions for *Lemma 2* are more likely to be satisfied, *ceteris paribus*.

Critics of race-based admissions policies contend that eliminating racial preferences will necessarily lead to a “more-able” student body. As the analysis in the previous section attests, this need not be the case. In fact, the elimination of racial preferences in combination with the retention of legacy preferences could well lead to a “less-able” student body.⁷ Hence, if the real intent of the policy change is to produce a “more-able” student body, then consideration should perhaps be given to eliminating all preferences, not simply racial preferences (*i.e.*, a preference-free admissions set). Admittedly, such policy prescriptions are unlikely to be popular with college administrators as they greatly limit their ability to extract contributions from wealthy alumni.

Finally, it should be recognized that eliminating racial preferences while retaining legacy preferences may prove to be doubly-damning to minorities—possibly even reversing the gains in college graduation rates that these groups have achieved over the last two decades (Bowen and Bok, 1998). The concern is that past discrimination in this country, inclusive of its implications for the distribution of wealth,⁸ may limit the degree to which minorities can avail themselves of legacy preferences.

⁷ This, of course, is a variation on the *General Theory of the Second Best*—eliminating only one of multiple constraints can [actually] lead to a lower level of social welfare. See Lipsey and Lancaster (1956).

⁸ See Loury (2002) inclusive of Tables 1-4 and Figures 1-2 in the Appendix.

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