

**ACCESS AND ELIGIBILITY IN A RACE-NEUTRAL POLICY  
ENVIRONMENT: ADVERSE IMPACT TOWARDS UNDERREPRESENTED  
MINORITIES IN THE UC SYSTEM**

José L. Santos  
Nolan L. Cabrera  
Kevin J. Fosnacht

Department of Education  
University of California, Los Angeles

Primary Contact: José Luis Santos, Ph.D.  
Assistant Professor  
Department of Education  
UCLA Graduate School of Education & Information Studies  
3123 Moore Hall, Box 951521  
University of California, Los Angeles  
Los Angeles, California 90095-1521

Voice: (310) 825-7549  
Fax: (310) 206-6293  
Email: [jsantos@gseis.ucla.edu](mailto:jsantos@gseis.ucla.edu)

Category: Understanding the Impact of 209

**Abstract:** The passage of California’s ballot initiative *Proposition 209* in 1996, that, effectively, ended race consciousness in admission policies adversely impacted traditionally underrepresented minorities’ (URMs) undergraduate access to the University of California. This post-209 policy effect has been measured by examining the differences in URMs applications, admissions, and enrollments and the differences in market share in all three aspects pre- and post-209 with that of non-URMs. However, the magnitude in the difference has not been fully explored. Some scholars have examined the effects of 209 on the likelihood of a URM applying to a UC while others have explored the ways merit in California has been reconstructed. Missing from the literature is an empirical treatment of the magnitude of the effect of 209 on access for URMs while considering the relative growth in the eligibility pool of those URMs that meet UC eligibility standards. This proposed study seeks to understand the effects of 209 by examining the number of undergraduate applications, admissions, and enrollments pre- and post-209 by accounting for the growth in UC eligibility for URMs. In short, this proposed study will examine the extent of the effect of 209 for URMs on the various stages of applications through enrollment vis à vis growth in URMs UC eligibility by applying an Impact Ratio Test to establish prima fascia evidence that an adverse effect exists between URMs and non-URMs and test the statistical significance of the disparate rates at each stage by using a Standard Deviation Test to determine empirically whether or not an adverse effect exists and the magnitude of such effect.

## **Introduction**

After the implementation of California’s Proposition 209, which eliminated consideration of race in the admissions process, a precipitous and significant drop in the number of underrepresented minorities<sup>1</sup> (URMs) gaining admissions to the University of California system at both the undergraduate and graduate levels occurred (Pusser, 2001; Robinson, et al., 2003). Explanations for this decline vary and can be summed up in two divergent viewpoints. Supporters of the legislation claim this trend is evidence that URM students were simply not qualified and did not meet the University of California admissions standards (Connerly, 2000). Others argue that the negative publicity surrounding the changing policy, as well as narrowly defining “merit,” drove qualified minority candidates elsewhere (Pusser, 2004). Overall, the true impact of Proposition 209 is currently unknown, and understanding its effect on the UC system is difficult to disentangle due to the changing internal and external pressures in higher education. Notwithstanding, 10 years have passed since the implementation of Proposition 209 and it is generally believed that this time lapse is an optimal time in the policy cycle to evaluate its direct and indirect effects (Sabatier, 1999).

### *Background*

Immediately after the implementation of California Proposition 209, the URM numbers in the UC system declined significantly and have yet to return to pre-209 levels (Pusser, 2004). These numbers remain low even after the initial “cooling effect” whereby schools eliminating affirmative action programs are seen as unwelcoming to minority candidates (Orfield, 1998). The numbers have risen modestly since 1999 with concerted

---

<sup>1</sup> URM are American Indian, African American, Chicano or Latino as defined by the University of California Office of the President’ report on *Undergraduate Access to the University of California after the Elimination of Race-Conscious Policies* report commissioned in 2003.

efforts to increase outreach efforts as well as implementing comprehensive review<sup>2</sup> (UC Office of the President, 2003). While these programs are not a substitute for affirmative action, they appear to help stem the flow of URMs away from the UC system.

The number of African American, Chicano, and Latino freshman students entering the UC system dropped from 1995 levels in 1998, in comparison, the number of White and Asian American students increased. In 2002, the freshmen enrollment counts of African Americans and Latinos recovered to their approximate levels in 1995 and the number of Chicano students rose by about 700. However, between 1995 and 2002 the size of the UC student body greatly increased by nearly 8,000 students (all UC recognized ethnic groups are not included in Table 1), indicating that the proportion of African American, Chicano, and Latino students declined (see Table 1).

--Insert Table 1 Here--

Table 1 also includes the freshman enrollment counts for the two UC flagship campuses: Berkeley and Los Angeles. At both institutions, the number of entering freshman African American, Chicano, and Latinos did not recover to 1995 levels by 2002, despite the total number of freshman growing by 10 percent during the same period. The enrollment data at Berkeley and UCLA suggests that Proposition 209 had a larger impact on the flagship campuses, than the system as a whole.

Two studies examined the effects of Proposition 209 on Californian's college application decisions have used the list of institutions that SAT-takers choose to send their exam scores (Card & Krueger, 2004; Long, 2004). Both studies use SAT I score reports as a proxy for the quality and type of institutions a student would apply. The

---

<sup>2</sup> Comprehensive review ensures applications are read in their entirety in order to give consideration for life experiences such as work that may depress traditional definitions of merit (i.e., grades and SAT scores).

authors performed analyses to ensure the students who send score reports are highly correlated with the students who actually apply to the institution.

Long (2004) found significant changes in the score report decisions of Californians' after Proposition 209. The general trend showed Whites and Asian-Americans sending their score reports to higher quality colleges and universities, while minorities tended to send their SAT scores to lower quality institutions. Long also modeled students' behavior in their application decisions finding that the probability of acceptance significantly effects application decisions. Higher probability levels of acceptance tended to increase the number of score reports sent to all institutions, after controlling for academic fit. The model indicates that underrepresented minorities will reduce the number of score report sent to top-tier colleges and universities, indirectly leading to minorities attending lower quality institutions. Long argues the *indirect* effect of Proposition 209 is larger in magnitude than the direct effect.

Card and Krueger (2004) also used SAT score reports to examine the affect of the elimination of affirmative action on minority college and university applicants from California. Specifically, they examine the score reporting behavior of highly qualified minority applicants before and after Proposition 209. In contrast to Long's conclusions, Card and Krueger find that the elimination of affirmative action in California had little or no effect on the score reporting behaviors of highly qualified minorities to selective institutions, indicating that there was no indirect effect of Proposition 209 on this student population. They also found no tendency by highly qualified minorities to send more scores to lower quality institutions or to institutions with a larger proportion of minority applicants.

Another recent study examined how University of California's undergraduate admissions policies changed after the implementation of Proposition 209, the differing admissions criteria between the selectivity of three UC campuses (UCLA, Davis and Riverside), and the changing definition of merit (Contreras, 2005). The study found that highly and moderately selective UC campuses have increasingly competitive admissions standards. Contreras also examined the socioeconomic status (parental income and parental education) of students within ethnic groups. She found that minority students from higher socioeconomic backgrounds had a greater likelihood of being admitted to UCLA or Davis, the more selective institutions studied. The competitive advantage of students from higher socioeconomic backgrounds is attributed to their access to a relevant college curriculum and expanded educational support systems.

The final college destinations of the top third UC applicants show substantial variation by race. While the enrollment rate of all top students to the system has consistently hovered above 60 percent in recent years, top underrepresented students applicants are increasingly enrolling at selective private institutions. For top applicants denied admission to Berkeley or UCLA, the enrollment gap is even greater, indicating that top underrepresented students not accepted to the flagship campuses are leaving the system at high rates (nearly 60 percent) (Geiser & Caspary, 2005).

In an analysis of the 1999 freshman applicant cohort, Martin, Karabel, and Jaquez (2005) examined the application and admission rates of schools by their student bodies. Graduates from high schools with a large Latino student body were found to be underrepresented at UC due to low application rates. In contrast, schools with a heavily African American student body tended to have fewer students enroll at UC because of

low admissions rates. Additionally, large disparities between private and public institutions were discovered as the average private school admissions rate was almost 28 percent, double the rate of public schools (13 percent). However, this comparison understates the disparities, because a handful of elite private schools were previously found to have admissions rate exceeding 60 percent (Martin, Karabel, & Jaquez, 2003).

These studies are instructive but they tend to treat the admissions process as a monolithic entity with a focus on admissions rates. Our research is relatively unique because it specifically addresses adverse impacts at the application, admissions, and enrollment levels during the following years: 1995, 1998, and 2002.

#### *Statement of the Problem*

The aforementioned studies are informative, yet they only scratch the surface in determining this policy's impact on college admissions and there are many questions left unanswered. Is there a differential impact on URM applicants if they come from different SES backgrounds? Are the talented URM students simply leaving the state? What is the magnitude of the difference between URM applicants and non-URM applicants to the UC system? What is the magnitude of the difference between URM and non-URM admission and enrollment rates? Overall, if public resources are financing public higher education, are minority communities reaping the direct benefits for their investment or are they only subsidizing majority education? This study sets out to answer the following research questions:

1. Are the application, admissions, and enrollment rates for URM and non-URMs significantly different under affirmative action empirical-based protocols?

2. How do these application, admissions, and enrollment rates vary during and after the implementation of Proposition 209?

### **Theoretical Framework**

Equity is a social concept, which considers the social justice/fairness in the distribution of goods and services (Messick & Cook, 1983). Equity implies that there are mitigating external environmental factors that have to be taken into account. Two individuals who appear to have the same characteristics are not identical because each has been influenced by environmental factors, which have shaped his/her life. Therefore, it is inequitable to provide the same resources to each individual based on their perceived equality of character. In relation to application, admission, and enrollment rates we intend to apply an affirmative action based framework to test the significance of equity among the various rates between URMs and non-URMs.

#### *Conceptual Model of Application to Enrollment*

When a student chooses a college, they progress through three phases: predisposition, search, and choice (Hossler & Gallagher, 1987). These phases help students winnow down the thousands of potential colleges and universities to a single set of institutions from which the student ultimately chooses. In the case of a student wishing to attend a UC campus, the student must complete a number of defined tasks or admissions criteria. First, the student must graduate from high school, with an academic record demonstrating ability to undertake college-level course work. In California, this step is defined as UC eligibility, standards of academic performance (grade point average) and coursework that are clearly articulated by the university (Robinson et al., 2003). The next step for a UC-bound student is to take the standardized tests required by



the university, typically SAT I and IIs. The third step is for a student to apply to the UC campus(es) that satisfies her preference. The student has no control over the fourth step, the admissions decision from the institution. If the decision is positive, the student moves on to the fifth and sixth steps: declaring intent to enroll and enrolling.

In this six step process, two critical time points influence the institution the student will ultimately attend. The first time point, during the search phase, occurs when the student chooses which institution(s) to apply. The other time point is in deciding which institution the student will attend, the choice phase, at steps five and six. At both of these time points, the perceptions of the student will influence the choice of institutions to apply and to enroll. We posit that the end of affirmative action at the University of California affected the perceptions of URMs, ultimately affecting their decision to apply and to enroll at UC campuses. If non-affirmative action selection criteria disproportionately favor, for example, White and Asian students over URMs, the program is said to have a disparate impact against this protected class of people.

#### *Disparate Impact Theory*

The beginnings of disparate impact theory can be traced to the Supreme Court's 1971 holding in *Griggs v. Duke Power Co.* (Baldus & Cole, 1980; Welch III, 1991). In this case, the court decided that facially-neutral hiring requirements, but discriminatory in impact and not substantially related job performance, violated Title VII of the Civil Rights Act of 1964. In the Griggs case, Duke Power required employees to possess a high school degree or to pass a general intelligence test, however this requirement had a disparate impact on potential black applicants. In addition to objective criteria such as tests and job requirements, the Supreme Court in 1988 expanded the notion of disparate

impact to include subjective criteria through the *Watson v. Fort Worth Bank & Trust* decision (Welch III, 1991).

Disparate impact theory only applies to facially neutral requirements or policies. The theory ignores the state of mind and intent of an employer, instead focusing on outcomes (Rutherglen, 1987). An organization can justify a disparate outcome through demonstrating that a policy or requirement is substantially related to job performance. Most disparate impact cases use statistical data to examine if a neutral policy has negatively impacted a protected group such as women or minorities (Baldus & Cole, 1980). If it substantially favors one group over a protected one, an adverse impact has occurred (see Methods section for details on calculating adverse impact). However, an employer can justify a policy or requirement by demonstrating that such criterion is substantially related to job performance (e.g., a PhD can be a BFOQ for applying to be a professor).

#### *Higher Education and Disparate Impact Analysis*

Higher education institutions are subject to disparate impact analyses under Department of Education regulations mandated under Title VI (Perez, 2004). Given the Supreme Court's 2001 decision in *Alexander v. Sandoval*, any enforcement of these regulations must come through the Department of Education and no private right to action exists. There has been only one attempt to invoke an administrative action through these regulations and it occurred after the passage of Proposition 209 in California. Specifically, the complaint alleged that a disparate impact was caused by the use of the LSAT by UCs in the law school admissions process (Kidder, 2001; Perez, 2004). This claim did not succeed.

Despite the limited use of disparate impact regulations in higher education, disparate impact analyses, theoretically, could solve the ongoing debate over affirmative action in college admissions (Perez, 2004). Disparate impact theory has the benefit of being neutral, while seeking to identify requirements and policies that advantage *any* demographic group. Given the limited time frame for the use of affirmative action (Grutter, 2003) and the inability of public universities in California, Texas, Washington, and Florida to use racial considerations in admissions, disparate impact analyses have the potential to correct biases in the admissions process and ensure a level playing field among the various racial and ethnic groups (Perez, 2004).

In the literature devoted to the study of higher education, two studies have applied disparate impact theory and adverse impact techniques. Some thirty years ago, administrators in Berkeley's Graduate Division examined sex bias in the graduate admissions process (Bickel, Hammel, & O'Connell, 1975). In adverse impact tests of aggregate level data, large adverse impacts against women were found. However, when the admissions data was disaggregated by department, only a few departments were found to make admissions decisions outside of what was predicted by statistical tests. In a more recent analysis of disparate impact in higher education, Jackson (2006) examined the hiring of African American males in academic leadership positions. Jackson concluded that an adverse impact exists when comparing African American males to White males in academic leadership positions; however the representation of African American males have been increasing over time.

### **Research Design**

This study uses data from public documents from the University of California, Office of the President and California Postsecondary Education System. Notably it uses three time points to reflect pre- and post-209 time periods, academic years 1995 and 1998, and 2002. We chose academic year 1995 in order to capture the effect of a Pre-209 college selection process, 1998 in order to capture the effect of the implementation of 209, and 2002 in order to measure the effects after 209. Our intent is to compare URMs against non-URMs for the years of comparison in order to determine adverse impact and the magnitude of the effect of Prop 209. To determine adverse impact in selection rates towards URMs, we first calculate an impact ratio for the URMs. Second, we test the significance in selection rates between non-URMs and URMs using a Standard Deviation Test both UC-wide and for the individual campuses at the selected years.

The general form for tests of adverse impact are as follows: (1) Compute the rate at which a particular protected group (URMs) was selected for that transaction; and compute the rate at which the corresponding comparison group (non-URMs) was selected for the same transaction; and (2) Compare the two selection rates to determine whether a significant disparity between the rates of selection exists (PRI Associates, 1996). Impact Ratio Analysis Test (not a statistical test) tests whether or not the protected group is selected at a rate that is less than 80% the rate of the corresponding comparison group. The Impact Ratio general form:

$$\text{Impact Ratio} = \frac{\text{Application Rate}_{\text{URMs}}}{\text{Application Rate}_{\text{Non-URMs}}} \quad (1)$$

If the result or “impact ratio” is less than 80%, it establishes *prima facie* evidence that adverse impact has occurred and calls for further analysis using statistically valid tests.

In contrast to the Impact Ratio Analysis Test, the Standard Deviation Test is an empirical test of statistical significance. It is used by the Office of Federal Contracts and Compliance to determine whether statistically significant disparities exist between the group of people in question and group of people not in question (i.e., comparison group). Rather than being a measure of dispersion from the mean, the common application of standard deviation analysis measures the dispersion of the group of people in question’s application rate from the comparison group’s application rate. If the deviation in application rates is greater than –2 SDs, no adverse impact is indicated. The Standard Deviation Test general form:

$$\text{Standard Deviations of Application Rate} = \frac{\left(\frac{X}{N_1}\right) - \left(\frac{Y}{N_2}\right)}{\sqrt{\left(\frac{N}{N-1}\right) \times \left(\frac{n}{N}\right) \times \left(1 - \frac{n}{N}\right) \times \left(\frac{1}{N_1} + \frac{1}{N_2}\right)}} \quad (2)$$

Where,

- N<sub>1</sub> = URM UC
- N<sub>2</sub> = Non-URMs UC
- N = Total UC eligible
- X = Actual URM applied
- Y = Actual Non-URM applied
- n = Total Applied

Assuming a normal distribution of the sample, a result of less than -2 SDs and -3 SDs indicates that a significant adverse impact towards URMs at roughly the  $p \leq .05$  and  $p \leq .005$  levels, respectively.

Since the Impact Ratio Test fails to adjust for sample sizes, the test may fail to detect statistically significant differences in the selection rate (Morris, 2001). Therefore, both tests outlined above were performed for all three steps measured in the admissions process.

*Results*

Impact ratios (URM v. non-URM) were calculated for application, admissions, and enrollment rates in 1995 (pre-209), 1998 (implementation of 209), and 2002 (post-209). They produced the following results:

--Insert Table 2 Here--

The application impact ratio after the implementation of Proposition 209 dropped below the 80% threshold suggesting an adverse impact occurred due to the ballot initiative. The admissions and enrollment data did not indicate adverse impact occurred. Using the same test on the individual campuses provided the following results:

--Insert Table 3 Here--

Even though these results improved between 1998 and 2002, they did not rise above 80%; however, these results are insufficient to indicate adverse impact occurred. The impact ratios for the admissions and enrollment rates do not indicate an effect of Proposition 209.

To provide a statistically meaningful result, we subsequently ran the Standard Deviation Test for the UC System:

--Insert Table 4 Here--

While the overall admissions process at UC resulted in an adverse impact against URM students during and after the implementation of Proposition 209, an adverse impact towards URMs existed *previous* to 209 and affirmative action only partially mediated the overall adverse impact inherent throughout the UC admissions process. All but one of the above results was statistically significant: 1995 enrollments. Besides this one point in time, URMs experience adverse impacts throughout the application process in both Pre-

and Post-209 periods. These trends increased substantially in 1998 with the implementation of Proposition 209. While the adverse impact URM students experience during the admissions phase is being gradually reversed, the adverse impact experienced in the admissions and enrollment phases grew larger between 1998 and 2002.

To better understand where in the UC System these adverse impacts were occurring, we conducted the same analysis for the eight individual campuses<sup>3</sup>:

--Insert Table 5 Here--

Adverse impacts occurred during the application phase in 1995, and these trends worsened in the subsequent years with the exception of UC Riverside in 2002. At the admissions phase in 1995, half of the campuses had disparate impacts towards URM students even while using affirmative action. This changed in 1998 when all eight universities created adverse impacts through the admission process with the three most academically selective (UC Berkeley, UCLA, and UC San Diego) having the largest bias against URM applicants. The results from the incoming class of 2002 indicates that the implementation of comprehensive review partially mediated the disparate impact against URM students at these universities; however they still had significant adverse impacts versus URM applicants. In addition, UC Davis, UC Irvine, UC Riverside, and UC Santa Cruz saw the adverse impact experienced by URM applicants *increase* during the 2002 admissions cycle.

Finally, examining the enrollment phase offers some analytical difficulty. Students can apply and gain acceptance to multiple campuses, and majority students tend to apply to more campuses and also receive more acceptances than their minority counterparts. Within the UC System analysis, applicants to multiple campuses were not

---

<sup>3</sup> For this analysis, we did not include UC Merced or UC San Francisco because the former was not in existence during the implementation of Proposition 209 and the latter is a graduate only institution.

double counted, but in the campus-specific analysis they were (e.g., a student who applies to UC Berkeley and UCLA is counted in both institutional application rates but this person counts only once for the UC System application rate). The enrollment adverse impact numbers at individual campuses are artificially low because students can only enroll in one university<sup>4</sup>. Nonetheless, the combined results of the system in the aggregate and the individual institutions indicate that URM students are leaving the UC system at higher rates than their majority counterparts.

Despite the noted analytic challenge, there were three institutions that created adverse impacts for their students during the 1995 enrollment phase (UC Berkeley, UC Irvine, and UC San Diego). These decreased during the 1998 cycle, but there were four institutions (UC Berkeley, UC Davis, UC Irvine, and UC San Diego) that had adverse impacts in their 2002 enrollment cycles.

### *Discussion*

The results are alarming both in terms of the adverse impact experienced by URM students throughout the college selection process and the generally increasing nature of this adverse impact. While these numbers worsen in the wake of Proposition 209, it is important to note that even while using affirmative action, URM students were still adversely impacted by UC admissions requirements, the application, and the admissions decision processes.

The application results from 1995 produced a significant, adverse effect on URM students. This trend drastically worsened in 1998 and made a modest recovery by 2002.

---

<sup>4</sup> If a student is accepted at five UCs and attends one, they have an enrollment rate of 1/5 or 0.2 whereas a student who applies to two and enrolls in one has an enrollment rate of 1/2 or 0.5. URM students tend to apply and are therefore accepted at fewer UC institutions than their majority counterparts. Thus, the lack of adverse impacts in the enrollment phase is an artifact of this trend.



A possible explanation for the modest recovery by 2002, compared to 1998, is due to UC targeted outreach, which may have helped stem the tide of qualified applicants who were not applying, however, the decline experienced in 1998 could have been the result of the “chilling effect” generated by the negative publicity surrounding Proposition 209 (Orfield, 1998). Future research needs to examine the application adverse impact trend in the wake of current outreach budgetary cuts to see if the adverse impact increases or decreases. An increasing adverse impact would speak to the efficacy of the outreach programs.

This rebound by 2002 in applications was not experienced by all campuses. While UC Berkeley, UCLA, UC Riverside, and UC San Diego improved, UC Davis, UC Santa Cruz, and UC Santa Barbara, actually increased the magnitude of the adverse impact at the application phase. This could imply that part of the rebound experienced by the more academically prestigious and wealthier UC campuses came at the expense of the less academically prestigious and ones with fewer resources. UC Riverside, however, is a confounding factor in this hypothesis.

Those URMs who did apply experienced an adverse impact in the admissions decisions as well. UC System-wide, there was an aggregate adverse impact during the 1995 admissions phase when affirmative action was allowed. This adverse impact, as expected increased in magnitude after the implementation of Proposition 209 as evidenced by the 1998 standard deviation test results.

After the loss of affirmative action, the UCs implemented comprehensive review in an attempt to counter the impact of Proposition 209 on the admissions process (Pusser, 2004). Contrary to expectations, the implementation of comprehensive review resulted in

an increased adverse impact on URM applicants between 1998 and 2002 at the system level. Interestingly, the adverse impact results declined for the three most selective UC campuses between 1998 and 2002. This indicates that the various implementations of comprehensive review at the campus level may decrease or increase the adverse impact in the admissions process. While comprehensive review may have aided URMs in the admissions phase at the UC Berkeley, UCLA, and UC San Diego, it is not a substitute for affirmative action.

This trend in the aggregate admissions data was very consistent among the individual campuses. The 1995 admissions processes at four of the eight campuses resulted in adverse impacts (UC Irvine, UC Riverside, UC San Diego, and UC Santa Barbara); however, all eight produced adverse impacts by 1998. This was expected with the dismantling of affirmative action, and all institutions that produced adverse impacts in 1995 saw these adverse impacts increase in magnitude. Just like the UC aggregate data, the adverse impact occurring at all eight campuses in 2002 illustrates that comprehensive review is insufficient to counter the loss of affirmative action.

There was also an adverse impact in the post-209 enrollment phase of the college selection process. Those URMs who did gain UC admissions attended other institutions at significantly higher rates than their majority counterparts and this trend is growing. This reinforces Geiser and Caspary's (2005) findings, and is cause for concern as the UCs are losing students to both their private competitors and out-of-state schools. This indicates a need for race-sensitive admissions financial aid as a recruitment incentive that can allow the UCs to compete for this talent pool.

As previously illustrated, the disaggregated enrollment standard deviation scores provide some analytical challenges; however, they are still informative. The adverse impacts that resulted from the 1995 enrollments disappeared by 1998. Given the increased barriers to URM students making it to the enrollment decision in a Post-209 environment, this makes intuitive sense. The preparation necessary to gain admissions is so rigorous that those who made it through at this phase generally chose to enroll. However, the enrollment adverse impacts reappeared in 2002 specifically at some of the most selective schools in the UC System – UC Berkeley, UC Davis, and UC San Diego. This reinforces the argument that talented students are either being filtered to less selective UCs in addition to leaving the system in favor of private and out-of-state schools (Geiser & Caspary, 2005). This sifting to less selective UCs, however, is not the dominant feature of the system because, as previously discussed, the UC System produced an adverse impact in 2002 enrollments. Therefore, those URMs who do make it through the entire system are frequently choosing to enroll elsewhere. As URMs are choosing alternatives to the UC System, these institutions stand to erode their competitive edge as talented students are being lured by other schools.

### **Implications**

Throughout the three phases of the college selection process after the implementation of Proposition 209, URMs experienced adverse impacts. Those who undertook a college preparatory curriculum tended not to apply; those who applied were generally admitted at lower rates than their majority counterparts; and those who were granted admissions frequently declined UC's offer and left the system. Moreover, even when race was a consideration in the admissions process, URMs experienced adverse

impacts when applying and being admitted at UC indicating that racial considerations were able to ameliorate the disparate impact that occurs in the admissions process.

This calls for institutionalizing diversity whereby all phases of the college selection process become race-conscious. An individual program, even affirmative action, is insufficient to address this massive problem.

Comprehensive review and targeted outreach grew out of the elimination of affirmative action, but, as previously indicated, they are insufficient substitutes for race-conscious admissions. This does not imply, for example, that comprehensive review and affirmative action are mutually exclusive components of creating institutional diversity. Rather, they can both be mutually reinforcing entities; especially considering that affirmative action alone was also insufficient in eliminating the UC adverse impacts in a Pre-209 admissions environment.

These results indicate that the elimination of affirmative action was associated with a downturn in the application rate of traditionally underrepresented students to the University of California system. Similar declines in application rates at University of Texas at Austin after the *Hopwood* case and subsequent to the Supreme Court's finding of the University of Michigan – Ann Arbor's undergraduate admissions system broadly indicates that the removal of or a negative legal action towards affirmative action may imply to students that a particular campus is not welcoming to all racial/ethnic backgrounds. Therefore, the lack of or a threatened affirmative action program may dissuade African American and Hispanic students from applying.

We recommend that UC undertake significant, visible, public actions to demonstrate the university's commitment to diversity specifically towards members of

the groups most impacted by the implementation of Proposition 209. Also recommended are increased outreach efforts to cultivate a larger number of UC-eligible underrepresented students applying, largely dismantled due to the state and university's budgetary crisis. Finally, we recommend that the university reexamine its eligibility and admissions requirements and standards to minimize their adverse impact towards specific racial or ethnic groups.

It is imperative that this issue be immediately addressed because California is a minority-majority state where White and Asian students by themselves cannot maintain California's current levels of economic prosperity. If talented Black, Latina/o, and American Indian students are leaving the state, California's economy will suffer due to a "brain drain."

In addition, the UCs represent the best public education system in the world, and it remains that way through large public subsidies. If segments of California's population are systematically excluded from participation in the UC system (e.g., African Americans, Latina/os, and Native Americans), this hurts both the students as well as the communities that lose their next generation of doctors, lawyers, and teachers. This redistributive system takes money from low-income, communities of color to support affluent, generally White communities. This creates a "Reverse Robin Hood" system whereby taxes from minority communities support a system from which they generally do not benefit. This is particularly relevant for land-grant institutions that were founded with the specific intent of offering education to the masses as opposed to the children of the aristocracy.

Whether a person takes a utilitarian or social justice rationale, increasing diversity in the UC system is a justifiable and a necessary goal. This entails valuing diversity at all phases of the college selection process through tangible actions (e.g., targeted outreach). This is also insufficient if the students are not graduating, thus, diversity must be institutionalized in all facets of the university: from application through graduation. Affirmative action is only one, yet significant part of the strategy of keeping these students and developing them into educated, productive members of society.

### **Suggestions for Future Research**

Given the consistent disparate impact against URM students found in this analysis prior and after Proposition 209, the next step is to identify what policies or requirements are causing the adverse impact. In the application time point, one current UC policy that may be causing a disparate impact are the substantial standardized testing requirements of taking the ACT or SAT I and two SAT II subject tests, which require considerable financial resources to complete. Similarly, the UC's strict reliance upon standardized testing in determining eligibility for all but the top four percent of students per high school, when the institution is mandated to serve the top 12.5 percent, and the racial inequities inherent in standardized testing (Jencks & Phillips, 1998) indicate that this requirement may direct academically capable students, measured through coursework, away from the UC system. A final policy that may possibly cause a disparate impact is the university's early application filing period for fall admissions which lasts from November 1<sup>st</sup> to 30<sup>th</sup> for the class of 2007. This narrow and early application period disadvantages high schools without resources to handle a large volume of college applications in a narrow timeframe, especially given California's abhorrent counselor to

student ratio of about 1000 to 1 when the recommended ratio is 100 to 1 (McDonough, 2004).

In addition to the policies potentially causing an adverse impact at the application decision point, the admissions criteria used internally by institution consistently caused adverse impacts after the implementation of Proposition 209. One possible cause of disparate impact in the admissions decision process is the reliance of overly formulaic admissions criteria to achieve efficiency in the review process. For example, at UC San Diego over a quarter of the total possible points a student can receive are based on standardized testing (Comeauz & Watford, 2006), while the College Board, owner of the tests required by UC specifically warn against an over reliance on test scores (College Board, 2002).

While the over reliance on test scores in the UC admissions process may be one possible cause of disparate impact, the advantages given to students with the availability of Advanced Placement (AP) courses could be an additional cause. The UC admissions process awards bonus GPA points for students who enroll in AP classes (Solorzano, D. & Ornelas, A., 2002), but it is unknown to the authors if credit is awarded to students who have no or little access to AP courses in high school under comprehensive review.

Another possible cause of disparate impact is reader bias. Volunteer readers are used in the admissions process to evaluate applicants. UC Berkeley and San Diego claim to recruit readers from a variety of backgrounds each year; however UCLA discourages reader turnover, which may result in a more biased grouping of admissions readers (Comeauz & Watford, 2006). Additionally, UCLA has a large percentage of its readers from private schools, which may not reflect the tremendous diversity of the Los Angeles

area and ultimately could result in a bias towards the demographic of students who attend private high schools.

The URM students who survive the admissions process leave the UC system at rates significantly larger than their majority peers. Most likely, this is due to the competitive advantage private and out of state public institutions possess, as they are able to offer scholarships with racial considerations. However, the “chilly” campus climate perceived by URM students may contribute to their increased departure rates from the UC system (Orfield, 1998).



### References

- Baldus, D. C., & Cole, J. W. L. (1980). *Statistical proof of discrimination*. New York: McGraw-Hill.
- Bickel, P. J., E. A. Hammel, and J. W. O'Connell. (1975). Sex bias in graduate admissions: Data from Berkeley. *Science* 187(4175), 398-404.
- Bowen, W.G., Kurzweil, M.A., & Tobin, E.M. (2005). *Equity and excellence in American higher education*. Charlottesville, VA: University of Virginia Press.
- Card, D., & Krueger, A. B. (2004). *Would the elimination of affirmative action affect highly qualified minority applicants? Evidence from California and Texas* (NBER Working Paper 10366). Cambridge, MA: National Bureau of Economic Research, Inc.
- College Board. (2002) *Guidelines on the uses of College Board test scores and related data*. New York: Author.
- Connerly, W. (2000). *Creating equal: My fight against race preferences*. San Francisco: Encounter Books.
- Comeauz, E. & Watford, T. (2006). *Admissions and omissions: How "the numbers" are used to exclude deserving students 2005-2006 CAPAA findings*. Los Angeles, CA: Ralph J. Bunche Center.
- Contreras, F. E. (2005). The reconstruction of merit post-Proposition 209. *Educational Policy*, 19(2), 371-395.
- Geiser, S., & Caspary, K. (2005). "No show" study: College destinations of University of California applicants and admits who did not enroll, 1997-2002. *Educational Policy*, 19(2), 396-417.
- Gladieux, L.E., King, J.E., & Corrigan, M.E. (2005). The federal government and higher Education. In P.G. Altbach, R.O. Berdahl, & P.J. Gumport (Eds.), *American higher education in the twenty-first century: Social, political, and economic challenges* (pp. 163-197). Baltimore, MD: The Johns Hopkins University Press.
- Gratz v. Bollinger*. (2003). 123 U.S. 2411
- Griggs v. Duke Power Co.* (1971) 401 U.S. 424.
- Hopwood v. Texas*. (1996). 78 F.3d 932.

- Hossler, D., & Gallagher, K. S. (1987). Studying student college choice: A three-phase model and the implications for policymakers. *College and University*, 62(3), 207-221.
- Kidder, W. C. (2001). Does the LSAT mirror or magnify racial and ethnic differences in educational attainment? A study of equally achieving "elite" college students. *California Law Review*, 89, 1055–1123.
- Jackson, J. F. L. (2006). Hiring practices of African American males in academic leadership positions at American colleges and universities: An employment trends and disparate impact analysis. *Teachers College Record*, 108(2), 316-338.
- Jencks, C., & Phillips, M. (Eds.). (1998). *The black-white test score gap*. Washington, DC: Brookings Institution Press.
- Johnstone, D.B. (2005). Financing higher education: Who should pay? In P.G. Altbach, R.O. Berdahl, & P.J. Gumport (Eds.), *American higher education in the twenty-first century: Social, political, and economic challenges* (pp. 369-392). Baltimore, MD: The Johns Hopkins University Press.
- Laird, B. (2005). *The case for affirmative action in university admissions*. Berkeley, CA: Bay Tree Publishing.
- Long, M. C. (2004). College applications and the effect of affirmative action. *Journal of Econometrics*, 121(1), 319-342.
- Martin, I., Karabel, J., & Jaquez, S.W. (2003). Unequal opportunity: California high schools and access to the University of California. In R. Milkman (Ed.), *The state of California labor 2003* (pp. 119-154). Berkeley: University of California Press.
- Martin, I., Karabel, J., & Jaquez, S.W. (2005). High school segregation and access to the University of California. *Educational Policy*, 19(2), 308-330.
- McDonough, P. M. (2004). *Counseling and college counseling in America's high schools*. Alexandria, VA: National Association for College Admissions Counseling.
- Messick, D.M., & Cook, K. S. (1983). *Equity theory*. New York: Praeger Publishers.
- Morris, S.B. (2001). Sample size required for adverse impact analysis [Electronic Version]. *Applied HRM Research*, 6(1), 13-32.
- Orfield, G. (1998). Campus resegregation and its alternatives. In G. Orfield (Ed.), *Chilling admissions: The affirmative action crisis and the search for alternatives* (pp.1-14). Cambridge, MA: Harvard Education Publishing Group.

- PRI Associates, Inc., (1996). *Adverse impact monitor for Windows: user's manual*. Durham, NC: Laser Image Corporate Publishing.
- Perez, M. G. (2004). Fair and facially neutral higher educational admissions through disparate impact analysis. *Michigan Journal of Race and Law*, 9, 467–502.
- Pusser, B. (2001). The contemporary politics of access policy: California after Proposition 209. In D.E. Heller (Ed.), *The states and public education policy: Affordability, access, and accountability* (pp. 121-152). Baltimore, MD: The Johns Hopkins University Press.
- Pusser, B. (2004). *Burning down the house: Politics, governance, and affirmative action at the University of California*. Albany, NY: State University of New York Press.
- Robinson, N., Caspary, K., Santelices, V., Geiser, S., Studley, R., Masten, C., et al. (2003). *Undergraduate access to the University of California after the elimination of race-conscious policies*. Oakland, CA: University of California, Office of the President.
- Rutherglen, G. (1987). Disparate impact under Title VII: An objective theory of discrimination. *Virginia Law Review*, 73(7), 1297-1345.
- Sabatier, P. A. (199). The need for better theories. In P. A. Sabatier (Ed.), *Theories of the policy process* (pp. 3-17). Boulder, CO: Westview Press.
- Solorzano, D. & Ornelas, A. (2004). A critical race analysis of advance placement classes and selective admissions. *High School Journal*, 87,15-26.
- University of California, Office of the President. (2003). *Undergraduate access to the University of California after the elimination of race-conscious policies*. Oakland, CA: Author
- Watson v. Forth Worth Bank and Trust*, (1988) 487 U.S. 977.
- Welch III, K. A. (1991). The changing disparate impact theory of employment discrimination. *Howard Law Journal*, 34, 331 - 340.

Table 1. University of California Enrollment Counts 1995, 1998, and 2002

	UC System			Berkeley			Los Angeles		
	1995	1998	2002	1995	1998	2002	1995	1998	2002
African American	945	739	936	202	122	142	259	138	161
Asian American	6,247	6,979	9,200	1,009	1,217	1,281	1,012	1,243	1,363
Chicano	2,463	2,211	3,197	401	190	289	540	312	468
Latino	462	377	463	113	76	32	250	122	144
White	8,179	8,257	10,577	896	939	940	903	1,181	1,186

Table 2. Impact Ratios for UC System-wide URM Applications, Admissions, and Enrollments

Year	Application Ratio	Admission Ratio	Enrollment Ratio
1995	0.80	0.96	0.98
1998	0.65	0.87	0.91
2002	0.73	0.88	0.91

Table 3. Impact Ratios for Individual UC Campus URM Applications, Admissions, and Enrollments

	1995			1998			2002		
	Application Ratio	Admission Ratio	Enrollment Ratio	Application Ratio	Admission Ratio	Enrollment Ratio	Application Ratio	Admission Ratio	Enrollment Ratio
Berkeley	0.71	1.49	0.91	0.59	0.65	1.00	0.64	0.92	0.92
Davis	0.55	1.16	0.96	0.47	0.94	1.07	0.51	0.90	0.83
Irvine	0.72	0.91	0.80	0.54	0.87	0.97	0.68	0.73	0.81
Los Angeles	0.83	1.30	1.16	0.63	0.68	1.12	0.74	0.80	1.14
Riverside	0.95	0.97	1.27	0.89	0.88	1.23	1.00	0.89	1.41
San Diego	0.55	0.89	0.74	0.46	0.67	1.06	0.58	0.79	0.85
Santa Barbara	0.70	0.91	0.96	0.59	0.95	1.18	0.66	0.95	1.18
Santa Cruz	0.84	1.01	0.96	0.63	0.90	0.99	0.68	0.88	0.99

Table 4. Standard Deviation Test Results for UC System-wide URM Applications, Admissions, and Enrollments

Year	Applications	Admissions	Enrollments
1995	-29.1	-8.98	-1.44
1998	-56.1	-24.8	-8.60
2002	-48.6	-30.1	-9.39

Table 5. Standard Deviation Test Results for Individual UC Campus URM Applications, Admissions, and Enrollments

	1995			1998			2002		
	Applications	Admissions	Enrollment	Applications	Admissions	Enrollment	Applications	Admissions	Enrollment
Berkeley	-22.03	20.34	-2.87	-36.06	-14.68	-0.10	-34.94	-3.29	-2.43
Davis	-32.21	12.09	-0.95	-42.30	-4.48	1.72	-47.33	-8.18	-4.70
Irvine	-17.80	-7.34	-5.17	-34.66	-9.17	-0.64	-29.94	-22.21	-5.15
Los Angeles	-13.67	15.74	5.20	-36.04	-15.68	3.36	-29.10	-9.83	4.35
Riverside	-2.14	-2.45	4.76	-5.64	-12.11	4.90	-0.02	-17.08	10.40
San Diego	-36.15	-7.43	-6.12	-50.94	-19.20	1.19	-49.15	-14.61	-4.04
Santa Barbara	-20.88	-10.63	-0.98	-33.57	-3.63	4.36	-34.37	-3.87	4.69
Santa Cruz	-7.83	1.17	-0.71	-21.25	-9.22	-0.27	-25.90	-17.71	-0.28