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### Contentious Policies: The Experiment with Affirmative Action in Undergraduate Admissions to Public Universities

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### Abstract

Affirmative action policies have polarized the American public for over a quarter of a century. With regard to undergraduate university admissions, the Department of Education has not issued a definitive policy stance and has chosen to rely upon the results of previous and forthcoming research. Most scholars have not seized the opportunity to explore the effectiveness of affirmative action on a university's minority admission or enrollment rates. Additionally, scholars have not established the role that other confounding factors, such as financial aid and academic preparation, play in determining admission or enrollment rates. This research explores the role of affirmative action policies and percentage plans in determining the admission and enrollment rate of African Americans and Hispanics at the University of California and the State University System of Florida. Results indicated that affirmative action increased the admission rates of the three underrepresented minority groups while it decreases the enrollment rates of same groups in California. The amount of financial aid was also statistically significant when used to determine a minority group's admission or enrollment rate. In the Florida case, affirmative action was a factor in determining undergraduate admissions and enrollment rates. However, the models did not have the explanatory power of the California models. These findings have substantial implications for current public policy as the U.S. Supreme Court will consider two lawsuits against the University of Michigan and its various admissions policies.

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## **Abstract**

*Affirmative action policies have polarized the American public for over a quarter of a century. With regard to undergraduate university admissions, the Department of Education has not issued a definitive policy stance and has chosen to rely upon the results of previous and forthcoming research. Most scholars have not seized the opportunity to explore the effectiveness of affirmative action on a university's minority admission or enrollment rates. Additionally, scholars have not established the role that other confounding factors, such as financial aid and academic preparation, play in determining admission or enrollment rates. This research explores the role of affirmative action policies and percentage plans in determining the admission and enrollment rate of African Americans and Hispanics at the University of California and the State University System of Florida. Results indicated that affirmative action increased the admission rates of the three underrepresented minority groups while it decreases the enrollment rates of same groups in California. The amount of financial aid was also statistically significant when used to determine a minority group's admission or enrollment rate. In the Florida case, affirmative action was a factor in determining undergraduate admissions and enrollment rates. However, the models did not have the explanatory power of the California models. These findings have substantial implications for current public policy as the U.S. Supreme Court will consider two lawsuits against the University of Michigan and its various admissions policies.*

Few debates have remained as contentious throughout their existence as affirmative action. Affirmative action litigation became a regular tenant of the U.S. Supreme Court's docket in the last quarter of the twentieth century as the legal foundations of both proponents' and opponents' arguments were further eroded. The

majority of research completed on affirmative action policies in university admissions failed to create a compelling case for either the retention or removal of such policies. The only definitive conclusion was that an affirmative action policy produced different results when it was implemented at different colleges or university systems. This paper seeks to remedy the lack of detailed quantitative analysis concerned with the precise effects of affirmative action policies and percentage plans on undergraduate admissions by examining admission and enrollment rates at two state university systems.

The admission and enrollment rates of racial minorities at the University of California (UC) and the State University System of Florida (SUS) from the 1995-2001 period will be analyzed.<sup>1</sup> In order to determine the role such policies play with regard to changes in admission or enrollment rates, potential confounds such as a student's academic preparation and socioeconomic status were included in OLS regression models. This method was chosen so that a more precise understanding of the effects of affirmative action and percentage plans may be obtained. It is expected that the removal of affirmative action will result in lower admission rates for all underrepresented minority groups. Furthermore, the adopted percentage plans are not expected to be an appropriate substitute for prior affirmative action policies. The second anticipated result is that the presence of a diverse undergraduate student body will place a large role in the decision of an underrepresented minority student to attend a university. This second conclusion is of particular importance as the particular effects of affirmative action removal are considered. If admission rates decline, the result would be a lower enrollment at universities and ultimately, a decline in the diversity of the undergraduate student body. These trends will be most pronounced at the most selective campuses: UC Berkeley, UCLA, the University of Florida and Florida State University.

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<sup>1</sup> The UC admissions policies from 1995 to 2001 contained three possible policies; the first three years of which affirmative action policies were present, three subsequent years without any preferential admissions policy and one year with a percentage plan. The SUS had affirmative action policies in place for 1995 to 2000; while the last two years of the sample had percentage plans.



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*The University of California Case*

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The UC system continued to be a key actor in the evolution of the affirmative action policies after the Bakke decision was handed down.<sup>2</sup> It is for this reason that it was selected as a case study. A major admissions policy shift occurred first in California as the Board of Regents passed SP-1, also known as a "Proposition Ensuring Equality in Admissions" on July 20, 1995. SP-1 ended the use of affirmative action in undergraduate admissions to the UC system beginning in 1998 and graduate admissions in 1997 (UCOP 2001a). In November 1996, the California public voted to ratify the California Civil Rights Initiative (Proposition 209 or CCRI), which superseded SP-1. An amendment to the California State Constitution, the CCRI eliminated the consideration of an applicant's race or gender with regard to state employment, education and contracting programs (UCOP 2001b). When affirmative action was initially removed in 1998, the decline in minority admission and enrollment rates at the UC system resulted in public pressure on the Board of Regents to maintain a diverse student body.

The Board of Regents ultimately rescinded SP-1 in 2001 in order to implement new admission programs designed to increase minority enrollment rates. These policy changes included Eligibility in the Local Context (ELC), which provides an additional avenue of UC eligibility for students (UCOP 2002). Under ELC, California high school students who are in the top four percent of their junior class are automatically granted UC eligibility. Additionally, the UC system has stated that there will be a seat for every UC eligible student at one of the nine existing campuses. The ELC eligibility exists in addition to the standard UC admissions criteria where 50 to 75 percent of each campus' First-Time-In-College (FTIC) students are admitted on the basis of academic credentials alone (UCOP 2001a).

*The State University of Florida Case*

The universities that comprise the State University System of Florida (SUS) actively utilized affirmative action programs in

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<sup>2</sup> I have omitted a general synopsis of the evolution of affirmative action policies as several texts include excellent descriptions. A complete history of affirmative action may be found in Howard Ball's *The Bakke Case: race, education, and affirmative action*. (Lawrence, KS: University Press of Kansas, 2000). Another, although more concise, version is contained in William G. Bowen and Derek Bok's *The Shape of the River: long-term consequences of considering race in college and university admissions* (Princeton, NJ: Princeton University Press, 1998).

their admissions policies until the creation of the One Florida Initiative by Governor John E. "Jeb" Bush. The program eliminated the use of affirmative action policies in Florida; this policy shift took effect with the admission of the 2000-2001 freshman class. Florida A&M University was permitted to "continue as a state and national magnet institution for the production of baccalaureate and advanced degrees" (Bush 1999: 12) as it is recognized as a historically Black university.

Bush's "Equity in Education" plan included measures to assist Floridians in all stages of their educational careers while attempting to eradicate the three enablers that created the existing problems in public education system: lack of accountability, social promotion and racial and ethnic preference policies (Bush 1999: 1). The Bush plan acknowledged that diversity was a worthwhile goal for the state's postsecondary institutions to pursue and supported the consideration of other socioeconomic factors in the admission process.<sup>3</sup> Governor Bush also proposed guaranteed SUS admission to qualified high school seniors who ranked in the top 20% of their public high school senior class. This plan, also known as the "Talented 20," also supported an increase in need-based financial aid packages as well as preference in obtaining financial assistance for participating students. The Bush plan acknowledged that diversity was a worthwhile goal for the state's postsecondary institutions to pursue and supported the consideration of other socioeconomic factors in the admission process. Governor Bush also proposed guaranteed SUS admission to qualified high school seniors who ranked in the top 20% of their public high school senior class. This plan, also known as the "Talented 20," also supported an increase in need-based financial aid packages as well as preference in obtaining financial assistance for participating students.

## Literature Review

Although early scholarly literature in this area consisted of theoretical analysis, there has been a recent trend towards the use of case studies and large-scale quantitative research. The definitive volume on the subject remains *The Shape of the River* (1998), which has served as the benchmark for research published after it and redefined the manner in which previous works are considered.

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<sup>3</sup>The Equity in Education plan identified acceptable socioeconomic factors "such as income level, geographical diversity and whether a student is a first generation college applicant" (Bush 1999: 6).

Using the College & Beyond (C&B) database, William Bowen and Derek Bok studied the admissions policies and statistical data for 28 selective colleges and universities in order to determine the broad effects of affirmative action on minority admission rates and the satisfaction of those students who were admitted through affirmative action. In addition the C&B institutions, Bowen and Bok examined the admission and retention rates of underrepresented minority students at five highly selective institutions.

The analysis of selective institutions revealed that, in comparison to the average White students' SAT I score, more than 73 percent of African American students had a higher score on the math and verbal portions respectively. While their average SAT scores are higher, the African American enrollees at the five selective institutions still possessed lower scores than their White and Asian counterparts. In light of this situation, Bowen and Bok posit that the White and Asian enrollees may be the atypical students: "Nevertheless, this gap does not prove that they are deficient by any national standard; rather, it reflects the extraordinary quality of the White and Asian applicant who have been attracted to leading institutions in ever greater numbers" (Bowen & Bok 1998: 257).

Despite having above-average credentials, further analyses indicated that African Americans would constitute one percent of Harvard College without affirmative action policies to aid in the recruitment and admissions processes. While it is unlikely Bowen and Bok's findings are generalizable to the entire population, due to the biased case selection,<sup>4</sup> they may be appropriately applied to any highly selective postsecondary institution.<sup>5</sup> If this prediction is accurate, talented and underrepresented minorities who could no longer compete against White and Asian peers at highly selective institutions, and they would be forced to attend less selective programs.

This migration of minority students to less selective institu-

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<sup>4</sup>Bowen and Bok's work capitalized upon the existence of the C&B databases and its ability to acquire follow-up surveys of graduates from the participating institutions. While this database afforded Bowen and Bok a sufficiently large sample, the schools that participated (or who had the resources to participate) were 28 of the most selective institutions in the United States.

<sup>5</sup> These selective institutions would likely be the institutions that would require affirmative action programs; the only time an institution would logically create an affirmative action program is when the number of applicants exceeds the number of available seats in the entering class.

tions would logically initiate a "cascade" effect with the end result of increasing minority admission and enrollment rates at the institutions with the least selective admissions policies. Bowen and Bok qualified any extrapolations, such as this cascade hypothesis, as they articulated that the C&B database was never intended to be a representative sample of postsecondary institutions in the United States (Bowen & Bok 1998: lvii). This research intends to contribute to *The Shape of the River* by looking at several university systems, which encompass both institutions of varying selectivity in a longitudinal design from 1995 to the present.

Since *The Shape of the River* was published, there have been no contributions of its magnitude or scope to the body of existing quantitative literature. Several studies have been pursued by university systems, academics and government agencies alike. The most recent and thorough addition to this literature is the U.S. Commission on Civil Rights' (USCCR) updated "Beyond Percentage Plans: The Challenge of Equal Opportunity in Higher Education." The draft staff report was released during November 2002, and it contained detailed assessments of the existing percentage plan programs in California, Texas and Florida. The USCCR sought to determine if these programs were a plausible alternative to affirmative action policies.

The USCCR found that percentage plan programs were not adequate substitutes for affirmative action programs in all three states as they do not maintain the level of student body diversity found under affirmative action policies. The USCCR study offered conclusions of limited generalizability as all three programs were in effect for less than four years, an insufficient amount of time to capture time-lagged effects. In addition, the states studied either are majority minority states or have substantial, temporally established minority populations as of the 2000 Census (U.S. Census Bureau 2000).

A key element of the report was that while the raw number of minority admissions and enrollments had increased under percentage plans; the yield had not (USCCR 2002). The USCCR study implied that any claims of increased diversity upon this evidence were essentially a "smoke and mirror" illusion. Underrepresented minorities did not stand a stronger chance of admission or enrollment under a percentage plan program when the admission and enrollment rates for both policies were compared. The second relevant conclusion was that the decline in minority

admission and enrollment rates (associated with the removal of affirmative action) occurs when the policy shift is announced rather than when the new policy is implemented (USCCR 2002). This immediate decline is the result of an admission office's gradual adoption of the percentage plans or a desire on the part of the staff to complete the transition quickly. The report indicated that this immediate, but partial, policy adoption discouraged potential minority applicants from applying to more selective institutions upon the announcement.

The USCCR study was based in part upon a Texas Higher Education Coordinating Board (THECB) report entitled, "Report on the Effects of Hopwood on Minority Applications, Offers and Enrollments at Public Institutions of Higher Education in Texas." The executive summary of the THECB report highlighted the demographic characteristics of FTIC classes admitted under affirmative action and percentage plan programs at UT-Austin and Texas A&M University (TAMU).<sup>6</sup> The THECB report stated that the Hopwood decision had affected the number of African Americans applying to, being accepted by and enrolling at the most selective public institutions in Texas within one year (THECB 1998).

Among the conclusions of the THECB report was that more minorities were pursuing postsecondary education, particularly at the community college level. However, a caveat was made to this "increased diversity" claim as the THECB stated that statistics indicated that public universities and colleges in Texas, in particular UT-Austin and TAMU, remained racially stratified after the adoption of a percentage plan program. This inequality may have been the result of a trend identified by the THECB whereby the discrepancy between different minority groups' participation in education programs grows as students progress to higher levels of postsecondary education. If this trend holds, the increase found in minority participation at community colleges will not translate into a proportionate increase at the four-year public institutions. The authors acknowledged that neither affirmative action nor percentage plan policies would rectify these disparities because their roots were found in a "wider social, economic and educational system" (THECB 1998).

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<sup>6</sup>These two universities are the flagship institutions of the Texas postsecondary education system and were the only public universities to have an active affirmative action policy at the time of the Fifth Circuit Court's ruling in *Hopwood v Texas*.

The THECB argued that this multi-faceted racial divide is the cause of minority groups' lack of progress under affirmative action admissions policies at UT-Austin and TAMU. While wider economic and social systems may be partially responsible for the lack of minority progress, the THECB report did not provide statistical information that would indicate to what extent affirmative action policies, socioeconomic indicators and institutional factors determine where students apply and ultimately enroll. A fundamental flaw exists in a conclusion drawn from these trend lines; the data that forms the basis of many arguments does no more than indicate trends without identifying the statistical likelihood of occurrence or the magnitude of any discernable relationship.

A set of contradictory findings was published one year later in the *Stanford Law & Policy Review*. There Charles Gesheker asserted that affirmative action programs at the California State University system (CSU) failed to admit qualified minority students through the use of "special acceptance" policies. His primary critique of affirmative action is derived from his experience as a policy consultant for the Educational Finance committee of the California State Assembly and as a Professor of History at CSU-Chico. The individuals admitted under affirmative action policies failed to graduate within eight years; Gesheker cites the Fall 1986 entering class as a representative example. In Fall 1986, 70 percent of the 37 incoming African American students were admitted under "exceptional" circumstances and after eight years, the graduation rate was eight percent (Gesheker 1999: 5). Additionally, Gesheker states that of all African American freshmen who were admitted under exceptional circumstances to the CSU system between 1981 and 1999, less than 25 percent obtained a degree within eight years of enrollment.

Gesheker's argument is inherently problematic, as the cases he bases his argument upon are those institutions that are more likely to have an open admissions policy or minimal selectivity. There are three levels of postsecondary institutions in California's public education system; the UC, the CSU and the community colleges.<sup>7</sup> With the UC system being the most selective, the applicants to the CSU are then are individuals transferring from a community college or do not have the academic credentials to enter the UC system. To complicate the situation, Gesheker

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<sup>7</sup>The UC system admits students from the top 12 percent of high school graduates, the CSU system the top 30 percent and the community colleges have two-year programs with open admissions.

does not consider any additional motivation for an individual to leave the CSU system, such as transfer to "better" university. When these inadequacies are combined with only trend statistics, the result is that Geshekteer has illuminated policy areas and cases that need further study.

This lack of measures of association and correlation is common in recent literature as subjective anecdotes and minimal "hard" evidence are used as arguments in broad articles or testimony. These trends are particularly problematic in research concerned with institutions that maintain open admissions policies or are minimally selective. There is a noticeable dearth of research on these specific universities and colleges, which leads to an increased reliance on those studies or works that are published and provides little precedent from which subsequent academics can draw. However, this material can still provide valuable insights insofar as their weaknesses are acknowledged and any assertions are explored in later research.

The most recent state-specific research contradicts Geshekteer's conclusions. A 2000 report issued by the University of California Office of the President (UCOP) detailed the application, admission and enrollment rates of minority students during the first admission cycle without affirmative action. This study found similar trends to the THECB's report as minority admission and enrollment rates fell across all eight undergraduate campuses but the declines were disproportionately large at the Berkeley and Los Angeles campuses (Geiser et al. 2000).<sup>8</sup> However, the fluctuations in admission and enrollment rates are confounded by a phenomenon referred to as Tidal Wave II. Hayward, Breneman and Estrada wrote in a report for the California Postsecondary Education Commission (CPEC), an additional 500,000 individuals will attend postsecondary institutions in California between 1996 and 2006 (Hayward et al. 1998). Of these 500,000 students, the UC system would have to admit approximately 29,000 additional individuals during this period to meet California's guarantee of quality public education. The CPEC report analyzed headcount projections from nine different institutions, individuals or government agencies to determine this particular figure. Enrollment information for 1996 and 1997 indicated that the CPEC projections were correct.

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<sup>8</sup>Appendix A lists the campuses of each university system discussed in this paper.



This research is concerned with two over-arching questions: first, are affirmative action policies and percentage plans effective methods by which to increase the diversity of an undergraduate study body and second, do such policies increase the yield of underrepresented minority students? Based upon the existing literature two hypotheses were constructed:

1. The removal of an affirmative action policy will negatively impact the admission rates of underrepresented minorities to an extent that cannot be mitigated by the application of a percentage plan.
2. Underrepresented minority students will be less likely to enroll at a specific university if the removal of affirmative action has instigated a decline in the diversity of the undergraduate student body.

## DATA

To address the hypotheses, a database was constructed from the University of California Office of the President's (UCOP) and the State University Systems of Florida (SUS) records as well as information obtained from individual campus profiles and information sheets. The variables that were created from this information include the change in a minority group's admission and enrollment rates, the mean combined SAT I score for a campus, an institutional selectivity measure, the percentage of undergraduates receiving Pell grants and the mean Pell grant award in constant dollars. When necessary, information from UCOP that was provided by ethnic group, specifically Chicano and Latino, was recoded into a single Hispanic racial group. A recoded Hispanic group yields results that may be more easily compared to previous studies and research.

Ten campuses comprise the UC system, of which eight campuses were included in the study's sample. The San Francisco campus was not included, as it is a health sciences campus while UC-Merced was not included, as it had not begun to admit students. All eight remaining campuses were used in throughout the analysis, as the examination of selected campuses would yield a biased or incomplete illustration of policy effects. Of the eleven SUS universities, only five universities were included in this study. Florida A&M University was excluded as it is a historically African American university and thus exempted from Bush's One Florida Initiative. In addition, New College of Florida and Florida Gulf Coast University were founded after 1995 and were excluded on



the basis of an incomplete data set. The Universities of North Florida, South Florida and West Florida did not have data available for at least one variable and were excluded on that basis.

### *Dependent Variables*

A series of variables were created to measure both diversity in the applicant pool and the enrolled student population. The underrepresented minority population was defined as African American or Hispanic first-time-in-college (FTIC) students. Additionally the target population was limited to in-state applicants. The admission rate is defined as the number of admitted FTIC students divided by the number of FTIC applications. The admission rates were determined for each minority group on an annual basis. This method was chosen in an attempt to standardize the admission and enrollment rates in light of the Tidal Wave II phenomenon and the different selection criteria of the campuses.

The first dependent variable, change in minority admission rates, was defined as the difference in a specific racial group's admission rate for one year and its rate for the preceding year. Once again the use of the rate values, rather than the raw figures themselves, is intended to eliminate any bias that would occur as the result of a dramatic increase or decline either admissions or applications. I was unable to obtain the number of applications, admissions or enrollments for the UC system's 1994-95 admission cycle. Consequently, I calculated the dependent variable for every other year before replacing the missing values in the data set. These values were replaced using the linear trend at point function in SPSS.<sup>9</sup>

For the OLS regression model which is concerned with enrollment factors, a second dependent variable was created by dividing the number of enrolled FTIC students by the number of FTIC applicants for a given year. This method was chosen to represent the relatively small percentage of underrepresented minority students who complete the admissions process at a given university. At the same time, the formula provides the advantage of standardizing enrollment rates across different campuses.

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<sup>9</sup> More detailed information about my precise methodology, including formulas, may be found in Appendix B.

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*Independent Variables*

A series of measures were designed to test the economic diversity and academic credentials of the students who applied to, were admitted by and ultimately enrolled at the UC and SUS institutions. The socioeconomic status of a university's undergraduate population was measured by the percentage of domestic undergraduate students who received a Pell grant in a specific academic year as well as the university's mean Pell grant award in constant (1983) dollars. These two measures as Pell grant information is more accurate and complete than information commonly included in university profiles or fact books (Shireman 2000). Institutions regularly report the percentage of students who receive need-based financial aid; problematic trend as there is no universally accepted definition of need-based financial aid. It is a broad category which includes federal work-study programs, institutional aid and other non-federal forms of aid. Consequently, it is difficult not only to ascertain what standards are used to determine student eligibility for financial aid but also to compare institutions.

The percentage of domestic undergraduates who received Pell grant awards was calculated in two different formulas as a result of a change in measurement by the UCOP. Prior to the 1999-2000 academic year, the number of Pell grant recipients was calculated on a headcount basis. Each student who received a Pell grant, regardless of whether they were enrolled part-time or full-time, was equal to one student. Beginning in 1999-2000, UCOP calculated the number of recipients on a Full-Time Enrollment (FTE) basis. UCOP converts the headcount figure to a FTE value by awarding part-time student one-third of one point for each term they were registered at an institution on a quarter system or one-half of one point for each term they were registered at an institution on a semester system (UCOP 2001).<sup>10</sup> When the variable was created for the SUS schools, the headcount enrollment figure was used to calculate the value for all years. These economic diversity variables were tested for collinearity,<sup>11</sup> and no statistically significant relationship was found.

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<sup>10</sup> Chris Carter, a member of the Student Financial Service division of the UCOP, informed me that the change to the use of an FTE enrollment figure will minimally effect the enrollment counts. He indicated that the FTE methods slightly depressed the Headcount figure. (Chris Carter, interviewed by author, October 2002).

<sup>11</sup> The Pearson coefficient was  $-.235$ , ( $p \leq .107$ ).

Diversity in the undergraduate student body was measured through two different variables: the percentage of the undergraduate student body that belongs to a specific minority group and the percentage of the undergraduate student body that is an underrepresented minority. In both cases, the FTE undergraduate minority population was divided by the university's domestic undergraduate population. The same method is used to determine undergraduate diversity figures in both the UC and SUS cases. The undergraduate diversity figure replaces the affirmative action and percentage plan dummy variables in the enrollment factors model as the model focuses upon the individual applicant's decision. An affirmative action policy cannot be used by a student to evaluate a campus as part of their enrollment decision. However, a student can measure the diversity of a campus by observing the percentage of a campus which belongs to an underrepresented minority group.

A student's level of academic preparation is determined by the mean combined SAT I score for an institution in a given admission cycle. An institution's score is the mean combined SAT I score for its FTIC students.<sup>12</sup> This measurement was chosen to be consistent with previous literature, notably *The Shape of the River*, and on the basis that it is one of two widely used, standardized measures of a student's academic ability in the United States. In the two states studied, the SAT I test was preferred over the ACT test for use in undergraduate admissions. The use of either the SAT I or the ACT introduces the possibility of a racial bias against minority students. In the past decade a series of studies has shown that African Americans and Hispanics systematically score lower on the SAT I than either Whites or Asians (Camara & Schmidt 1999). This discrepancy remains even when parental education, family income and quality of high school education are held constant. The lack of a comparable standardized measure necessitates the use of SAT I scores despite this obvious weakness.

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<sup>12</sup> The College Board recentered SAT I scores in 1996, which resulted in slightly higher scores. There are no converted scores available for the UC system for 1995 and consequently the original 1995 scores were used.

The institutional reputation scores<sup>13</sup> were determined by the annual rankings from the U.S. News and World Reports' America's Best Colleges. This publication ranks most postsecondary schools on the basis of the student-teacher ratio, endowment, computing facilities and peer reputation scores. There is a considerable amount of debate among university administrators about the relatively subjective nature of the scores on the basis of the peer ranking, amongst other concerns (Seaman 1998). The U.S. News and World Report rankings are the most accessible for the majority of students and their parents; therefore, these scores are more relevant than the specific scores given by Kiplinger's or Barron's. As a result of the relative stability of these rankings, all admissions cycles prior to 1997-98 were accorded the university's 1997 ranking while later cycles received the 1998 score. The rankings were converted into a scale so that the higher ranked schools had a lower value. A university's tier served as the ordinal rank. However, if a university were given a specific placement within their tier that number was appended to the tier as a decimal.

The effects of affirmative action policies and percentage plans were discerned through the use of one or two dummy variables according to the case. The three potential policies - affirmative action, no affirmative action and percentage plans - necessitated the use of two dummy variables. These two variables, affirmative action and percentage plan, were coded "0" if no policy was present and "1" if such a policy was present. There were only two potential policies in Florida: affirmative action and Talented 20. Consequently, the percentage plan variable was not used.

## METHODOLOGY

The procedure for this study was divided into two portions in order to accommodate the hypothesized relationships listed earlier. In the first section, OLS regression models were used to determine the role affirmative action and percentage plans policies play in determining the admission and enrollment rate of underrepresented minorities. In the second portion, OLS regression models were

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<sup>13</sup> An institutional selectivity score, based on Bowen and Bok's measure, was originally used to capture the reputation of an institution and the quality of education received there. These scores were obtained through calculations using each institution's mean combined SAT I score. Bowen and Bok's precise scale was not employed in this study but rather served as the basis of a new scale. When this measure was used in the OLS regression models, it was highly collinear with the SAT I variable and was therefore dropped from the model.

used to indicate what independent variables played a critical role in a student's decision to attend a particular campus.

### *Admission Rate Model*

An OLS regression was run for each minority racial group with the following independent variables: the mean Pell grant award in constant dollars, the percentage of domestic undergraduates receiving Pell grants, the mean combined SAT I score for the FTIC students and the appropriate dummy variables for affirmative action and percentage plans policies (depending upon the case). The OLS regression model was then repeated for the White racial group as well as the overall group. The appropriate dependent variable for each OLS regression was either the change in admission rate for a specific racial group at either the UC or SUS system.<sup>14</sup> These tests resulted in four OLS regressions that enable comparisons of the independent variables' effects by university system and racial group.

### *Enrollment Factor Models*

In order to discern how a student decided to enroll at a particular university, the admission rate model was modified to produce the enrollment factor model. The university ranking, in addition to the percentage of the undergraduate student body which belonged to a specific underrepresented minority, was included among the independent variables. The affirmative action and percentage plan policy variables were not included in the enrollment factor model as these variables are tools which may only be used by institutions. Enrollment factor regressions were run for each underrepresented minority group within a university system twice; once with the undergraduate diversity variable with the same racial group and once with the undergraduate diversity variable comprised of all underrepresented minorities. The second variation is intended to ascertain whether the size of an individual's racial group is more important than the size of the underrepresented minority community at large.

## FINDINGS

Simple descriptive statistics identify two major trends in the UC dataset; the number of applications increased drastically

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<sup>14</sup> The two university systems could not be combined as California did not move immediately to a percentage plan as Florida did.

between 1995 and 2001 while the admission and enrollment rates declined for the underrepresented minority groups. During this period, the numbers of unduplicated applications to the UC increased by 31% while the number of admitted applicants increased by 34% during the period of analysis. This is consistent with projections from the California Postsecondary Education Commission (CPEC) which expects that the UC will receive 29,000 additional students between 1996 and 2006 (Hayward et al. 1998). During this study, the largest increase among underrepresented minorities was the 26% increase in Hispanic student's applications. Census data indicates that during this time period the Hispanic population grew by 1.165 million (State of California Department of Finance 2001). The African American application rate only rose 13% between 1995 and 2001. Despite this general increase in applications and overall admissions, the admission and rate of underrepresented minorities remained relatively stable or decreased during the seven years of study.

Chart I: UC Applications by Racial Group\*

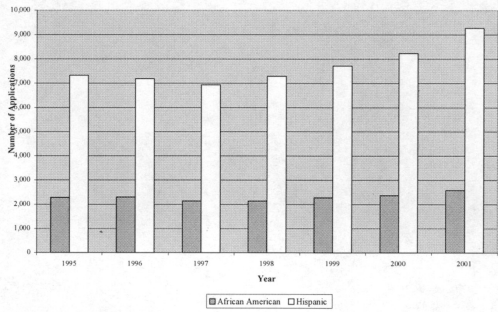
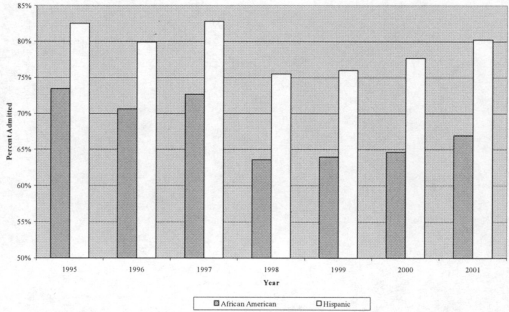


Chart II: UC Admit Rates by Racial Group



\*All data for the UC graphs was obtained from the University of California's Office of the President.

The OLS regressions allow for a detailed examination of how affirmative action and percentage plans interact with other socioeconomic factors; in this study, the Pell recipient, the mean Pell grant award and the mean combined SAT I score. As such, emphasis is placed on the beta weights ( $\beta$ ) and their significance levels associated with the affirmative action and percentage plan dummy variables rather than the adjusted R<sup>2</sup> value and the model's significance. While underrepresented minorities all experience difficulties in gaining admission to flagship universities, the programs that are created to help all underrepresented minorities tend to aid some racial groups more than others. The beta weight for the affirmative action variable is 1.449 ( $p \leq .001$ ) and 1.552 ( $p \leq .001$ ) in the African American and Hispanic models respectively; these were the second largest beta weights overall. The relative size of the affirmative action beta weights implies that the presence of an affirmative action program plays a decisive role in determining whether an African American or Hispanic student is admitted to a UC institution.

The beta weights for the mean Pell grant award (in constant dollars) variable were also the largest in both underrepresented minority models. This pair of statistics indicates that the amount of financial aid a school offers is the most critical factor in explaining the change in the admission rates of underrepresented minorities. While the Pell grant award and affirmative action variables were not associated<sup>15</sup>, it is probable that the concepts they measure overlap. Affirmative action policies benefit underrepresented minorities more than any other racial group while Pell grants are traditionally awarded to the neediest students. A Pearson's chi-square test was performed upon the mean Pell grant award and affirmative action variables in order to determine if such a relationship existed. However, no significant chi-square value was obtained and consequently, there is not a collinearity problem that needs to be addressed. The considerable distance between the two largest beta weights and the remaining values indicates that that affirmative action policies and financial aid play the largest role in affecting change in African American and Hispanic admission rates.

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<sup>15</sup> The  $X^2$  significance test for affirmative action and Pell grant award test was .400 while the same test run with the percentage plan variable also yielded a  $X^2$  value of .400.



**Table I**  
**University of California**  
**Causal Factors of Change in an Underrepresented Minority's Admission Rate**

	B	Std. Error	
<b>African American</b>			
(Constant)	-1.087***	.251	
Affirmative Action dummy variable	.235***	.040	1.449
Percentage Plan dummy variable	-8.825E-02*	.039	-.385
Pell Recipients	-.130	.171	-.092
Average Pell grant award	7.723E-04***	.000	1.674
Average SAT I score (recentered)	-2.777E-05	.000	-.029
R <sup>2</sup> = .440		Adjusted R <sup>2</sup> = .384***	
<b>Hispanic</b>			
(Constant)	-.929***	.194	
Affirmative Action dummy variable	.219***	.031	1.552
Percentage plan dummy variable	-9.606E-02**	.030	-.481
Pell Recipients	-.189	.132	-.153
Average Pell grant award	7.735E-04***	.000	1.920
Average SAT I score (recentered)	-1.407E-04	.000	-.171
R <sup>2</sup> = .561		Adjusted R <sup>2</sup> = .517***	

\*  $p \leq .05$

\*\*  $p \leq .01$

\*\*\*  $p \leq .001$

N=56

In the UC cases, the enrollment factor models yielded contradictory results with regard to the critical components of African American and Hispanic students' decision to enroll at a specific university. Presented in Table II, the enrollment models indicate that African Americans are influenced in their decision to enroll by an increasingly large percentage of either their own racial group or all underrepresented minority undergraduates. The beta weight for the African American percentage figure was .809 ( $p \leq .001$ ), which is slightly larger than that of the underrepresented minority population, .655 ( $p \leq .001$ ). This relationship suggests that while the presence of Hispanics is important in the decision-making process for African Americans; it is not an adequate substitute for the student's own racial group. In both regression models, the beta weight for both versions of the undergraduate diversity variable are nearly twice as large as the second largest beta weight, which was one of two financial aid variables. This finding indicates that African American admitted students consider the diversity of an undergraduate college the most important factor in making an enrollment



decision. Further support for this conclusion is found in the greater explanatory power of the model with African American figure, which has an adjusted R2 of .658 ( $p \leq .001$ ) as opposed to an adjusted R2 of .470 ( $p \leq .001$ ) with the underrepresented minority percentage value.

The Hispanic enrollment factor models, either with their own racial group percentage or all underrepresented minorities, did not yield results that indicated the diversity of a campus was a particularly important part of a student's enrollment decision. Table III contains the pertinent statistics for these trials. These adjusted R2 values indicate that the Hispanic enrollment models explain at least 70% of the variance in the dependent variable. In both cases, the diversity variables were among the smallest beta weights in the model and failed to be statistically significant. The lack of substantial beta weights indicates that potential Hispanic enrollees do consider the diversity of a campus to be a decisive factor in an enrollment decision. There was little difference in the explanatory value of the model; the two models had adjusted R2 values within seven-thousandths of the other. In both models, the institutional reputation score had the largest beta weights with the mean Pell grant award having the second largest beta weights. Together, the influence of these two beta weights is substantially larger than the remaining three beta weights combined. This suggests that a Hispanic student's decision to attend a UC Campus is almost entirely based upon offered financial aid packages and the institution's reputation.

**Table II**  
**University of California**  
**Determinants of an African American Student's Enrollment Decision**

African American Population Model			
	B	Std. Error	
(Constant)	0.467***	0.099	
Percent of Undergraduates, African American	2.382***	0.318	0.809
Average SAT I Score (Recentered)	-2.366E-04***	0.000	-0.462
Pell Recipients	-0.230*	0.091	-0.298
Average Pell grant award	-5.848E-05**	0.000	-0.233
Institutional Reputation	5.301E-03	0.017	-0.035
R <sup>2</sup> = .689		Adjusted R <sup>2</sup> = .658***	

All Minorities Model			
	B	Std. Error	
(Constant)	0.327**	-0.118	
Percent of Undergraduates, Minority	0.655***	0.152	0.655
Average SAT I Score (Recentered)	-1.173E-04	0.000	-0.229
Pell Recipients	-0.111	0.114	-0.143
Average Pell grant award	-7.795E-05**	0.000	-0.311
Institutional Reputation	-2.079E-02	0.023	-0.137
R <sup>2</sup> = .518		Adjusted R <sup>2</sup> = .470***	

\*p ≤ .05  
\*\*p ≤ .01  
\*\*\*p ≤ .001  
N = 56

**Table III**  
**University of California**  
**Determinants of a Hispanic Student's Enrollment Decision**

Hispanic Population Model			
	B	Std. Error	B
(Constant)	4.262E-02	0.125	
Percent of Undergraduates, Hispanic	-0.281	0.237	-0.143
Average SAT I Score (Recentered)	9.932E-05	0.000	0.132
Pell Recipients	-0.179	0.118	-0.158
Average Pell grant award	-1.641E-04***	0.000	-0.446
Institutional Reputation	0.215***	0.026	0.964
R <sup>2</sup> = .739		Adjusted R <sup>2</sup> = .713***	

All Minorities Model			
	B	Std. Error	B
(Constant)	0.05137	0.129	
Percent of Undergraduates, Minority	-0.07939	0.166	-0.054
Average SAT I Score (Recentered)	1.010E-04	0.000	0.134
Pell Recipients	-0.226	0.124	-0.199
Average Pell grant award	-1.662E-04***	0.000	-0.452
Institutional Reputation	0.204***	0.025	0.914
R <sup>2</sup> = .733		Adjusted R <sup>2</sup> = .706***	

\*p ≤ .05  
\*\*p ≤ .01  
\*\*\*p ≤ .001  
N = 56

Simple trend graphs indicate that the SUS, like the UC system, saw a substantial increase of minority applications during the study period.<sup>16</sup> The largest increase occurred in the number of African American applications, which rose 164%, from 5,526 applications in the 1995-96 admissions cycle to 14,567 in the 2001-02 cycle. The rate of Hispanic applications increased at a rapid, but comparatively slower, pace. Prospective Hispanic students submitted 120% more applications in 2001-02 than in 1995-1996; a change from 4,817 applications 10,576 applications in the seven year period. A visual representation of these trends can be found in Chart III.

Despite substantial increases in application rates, these two racial groups did not experience a corresponding increase in their respective admission rates to the SUS. Chart IV illustrates these trends. From the 1995-96 to the 2001-02 cycles, the admission rates for African American applicants fell from 69% to 65%. A slight increase occurred in the 2001-02 admissions cycle, which is the second year of the percentage plan program included in the One Florida Initiative. However, this was a modest increase of less than two percent from the prior admission cycle.<sup>17</sup> Hispanic admission rates also decreased over the seven year period; falling from 82% in the 1995-96 cycle to 74% in 2001-02. While Hispanic admission rates also increased in the 2001-02 cycle, it was an increase of less than half a percent from the 2000-01 admissions cycle.<sup>18</sup>

The increase in the number of applications submitted to the SUS may have affected the trends previously described in this paper. If the SUS exhibits the same response to an influx of applicants to their undergraduate programs as the UC, one would expect to see the rate of admission and enrollments for all racial groups to decline. It is difficult to conclude, however, what the true repercussions of an increasing applicant pool are in Florida. There is no

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<sup>16</sup> This trend data utilizes data from all SUS institutions that existed prior to 1995 and were subject to the One Florida Initiative. Therefore, there are eight institutions included in the trend data with FAMU, FGCU, and NCF being excluded. The addition of FGCU and NCF, opened in 1997 and 2000 respectively, could potentially interfere with the detection of any trends within the entire SUS community.

<sup>17</sup> The African American admission rate to the SUS was 63% for the 2000-01 admissions cycle.

<sup>18</sup> The Hispanic admission rate to the SUS was 74% in 2000-01.

available literature on an application increase of the magnitude of California's tidal wave phenomenon currently the existence of a tidal wave phenomenon occurring, or projected to occur, in Florida.

Chart III: SUS Applications by Racial Group\*

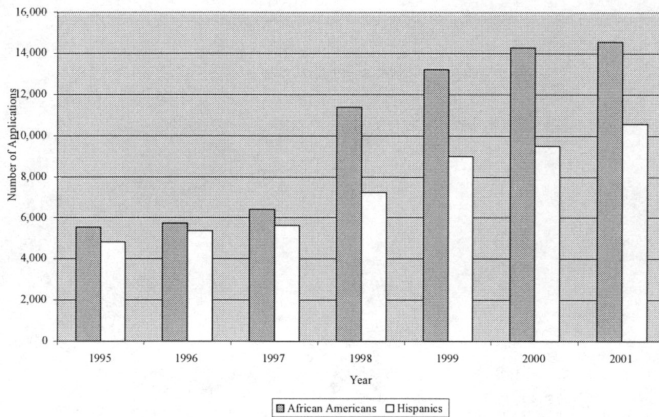
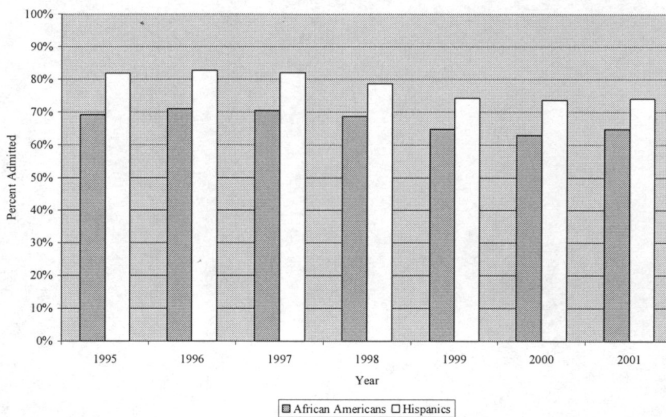


Chart IV: SUS Admission Rates by Racial Group



\* All information for the SUS graphs was obtained from the Florida Department of Colleges and Universities.

The OLS regression models that were conducted on the change in admission rates at the SUS yielded similarly unexpected results, particularly when compared with the UC results. The SUS Admission Rate regression models offered little explanatory value as evidenced by the poor adjusted R<sup>2</sup> values of both the African American and Hispanic models, which may be found in Table IV.

Both the African American and Hispanic models yielded statistically weaker results than their UC counterparts. The affirmative action variable had the largest beta weight that was statistically significant; however, the negative direction of the unstandardized B coefficient indicates that it is inversely related with an increase in the admission rate. While this is an unexpected result, the small adjusted R<sup>2</sup> value of .180, ( $p \leq .05$ ) suggests that conclusions based upon such a result such be modest at best. The statistical insignificance of the Hispanic regression model indicates that the model offers no insight into which factors affect the number of Hispanic applicants who are admitted annually.

**Table IV**  
**State University System of Florida**  
**Causal Factors of Change in an Underrepresented Minority's Admission Rate**

	B	Std. Error	
<b>African American</b>			
(Constant)	0.629*	0.296	
Affirmative Action (dummy)	-7.869E-02*	0.032	-0.584
Pell Recipients	-0.114	0.047	-0.105
Mean Pell grant award	-3.610E-04*	0.000	-0.688
Mean combined SAT I score	-1.291E-04	0.000	-0.145
R <sup>2</sup> = 0.276	Adjusted R <sup>2</sup> = 0.180*		
<b>Hispanic</b>			
(Constant)	0.674**	0.235	
Affirmative Action (dummy)	-4.209E-02	0.025	-0.387
Pell Recipients	-0.346	0.196	-0.395
Mean Pell grant award	-2.404E-05	0.000	-0.057
Mean combined SAT I score	-4.570E-04*	0.000	-0.636
R <sup>2</sup> = 0.301	Adjusted R <sup>2</sup> = 0.208*		

\*  $p \leq .05$

\*\*  $p \leq .01$

N=35

The SUS enrollment factor models offered results that were the reverse of those found in the UC models. The African American models, which are shown in Table V, indicate that students place a lower importance on the number of students who are of their own racial group or are a member of any underrepresented minority. The same racial group variant of the undergraduate diversity variable had a beta weight of 0.643 ( $p \leq .05$ ) and the corresponding adjusted R<sup>2</sup> value for the model was .324 ( $p \leq .01$ ). However, the mean combined SAT I score and the average Pell grant award exerted more influence over the model. The mean Pell grant award contradicted the expected results; a decrease in the mean Pell grant corresponded with an increase in the enrollment of

African American students. In the second model, the beta weight for the percentage of undergraduates who were underrepresented minorities was nearly non-existent. The lack of a large beta weight implies that African American students did not consider the percentage of Hispanics when making an enrollment decisions and if they did, the number of Hispanic students exerted a negative influence upon the model. The adjusted R<sup>2</sup> value for this model was .281 ( $p \leq .05$ ), slightly lower than the former model, and the remaining beta weights all decreased as well. All variables, except the Pell recipients and institutional reputation variables, exerted an unexpected and negative influence on the model.

In the SUS case, the Hispanic enrollment factors models again differed from the UC case as the results indicate that diversity in a university's undergraduate student body is an important factor in an enrollment decision. Both models had a high predictive value as they explained over 75% of the variance in the dependent variable. They differed from the previous trials as the model with the underrepresented minority figure had a larger adjusted R<sup>2</sup> value, .752 ( $p \leq .001$ ) than the same racial group model, .743 ( $p \leq .001$ ). In addition, the beta weight for the percentage of undergraduates who were underrepresented minorities, .916 ( $p \leq .001$ ), was larger than the beta weight for the percentage of undergraduates who were Hispanic, .850 ( $p \leq .001$ ). These values indicate that Hispanics admits are willing to compensate for a smaller Hispanic population with an increase in the African American student body. Furthermore, the strength of the beta weights implies that a Hispanic student's enrollment decision was influenced by the size of the entire underrepresented minority population rather than their same racial group. While these differences do occur and must be noted accordingly, the relative difference between the adjusted R<sup>2</sup> values and undergraduate diversity beta weights is minimal. A second deviation from expected results was that the mean Pell grant award figure was again inversely related to an underrepresented minority student's decision to enroll.



**Table V**  
**State University System of Florida**  
**Determinants of an African American Student's Enrollment Decision**

**African American Population Model**

	<b>B</b>	<b>Std. Error</b>	
(Constant)	-0.234	0.901	
Percent of Undergraduates, African American	1.643	1.208	0.643
Average SAT I Score (Recentered)	8.169E-04	0.001	0.732
Pell Recipients	-0.142	0.339	-0.104
Average Pell grant award	-4.987E-04***	0.000	-0.758
Institutional Reputation	2.59E-03	0.040	0.030
$R^2 = .423$	Adjusted $R^2 = .324^{**}$		

**All Minorities Model**

	<b>B</b>	<b>Std. Error</b>	
(Constant)	8.210E-01	0.494	
Percent of Undergraduates, Minority	-1.230E-03	0.125	-0.003
Average SAT I Score (Recentered)	-3.067E-05	0.000	-0.027
Pell Recipients	1.140E-01	0.529	0.084
Average Pell grant award	-3.623E-04**	0.000	-0.551
Institutional Reputation	-4.554E-02	0.021	-0.535
$R^2 = .387$	Adjusted $R^2 = .281^*$		

\* $p \leq .05$

\*\* $p \leq .01$

\*\*\* $p \leq .001$

N = 35

**Table VI**  
**State University System of Florida**  
**Determinants of a Hispanic Student's Enrollment Decision**

**Hispanic Population Model**

	<b>B</b>	<b>Std. Error</b>	
(Constant)	0.607	0.345	
Percent of Undergraduates, Hispanic	0.428***	0.086	0.850
Average SAT I Score (Recentered)	-1.381E-04	0.000	-0.114
Pell Recipients	-3.369E-02	0.346	-0.023
Average Pell grant award	-1.353E-04	0.000	-0.189
Institutional Reputation	-1.032E-02	0.013	-0.111
$R^2 = .781$	Adjusted $R^2 = .743^{***}$		

**All Minorities Model**

	<b>B</b>	<b>Std. Error</b>	
(Constant)	0.315	0.315	
Percent of Undergraduates, Minority	0.414***	0.080	0.916
Average SAT I Score (Recentered)	9.006E-05	0.000	0.074
Pell Recipients	-4.959E-02	0.337	-0.034
Average Pell grant award	-1.709E-04*	0.000	-0.239
Institutional Reputation	1.292E-03	0.013	0.014
$R^2 = .789$	Adjusted $R^2 = .752^{***}$		

\* $p \leq .05$

\*\* $p \leq .01$

\*\*\* $p \leq .001$

N = 35

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## Conclusions

Trends in minority application, admission and enrollment rates indicate that there is a growing discrepancy in the number of applications submitted to universities and the number of admitted and enrolled underrepresented minority students in the public universities of California and Florida. According to this evidence the removal of affirmative action will lead to a decline in minority admission rates; a trend which is accompanied by a growing inhibition on the part of minority students to attend a predominantly White university.

When these hypotheses were empirically tested, the regression models failed to yield the conclusive results desired. The overarching commonality in the various results was that the results varied by the university system; an important observation in and of itself. It is entirely apparent that affirmative action is both a highly effective and an ineffective means to achieve diversity in an undergraduate student body dependent upon the case.

The presence of an affirmative action policy has the capability to explain a large portion of the change in underrepresented minority admission rates from one admission cycle to the next. The regression model indicated quite clearly in the UC case that affirmative action plans were a critical factor in explaining why minority admission rates increased or declined. However, these models had only moderate explanatory value; an indicator that there is perhaps a variable that is not accurately measured or that a confound exists.

In Florida, affirmative action policies seemed to have a negative effect on both African American and Hispanic admission rates. As the affirmative action beta weights were the largest of the model, these findings consequently suggest that percentage plans are a more effective means to achieve undergraduate diversity. The SUS case is plagued by the same problem as its UC counterpart, except that there is no explanatory value in the Florida admissions models. In addition to the weakness of the model, no variable or the adjusted R<sup>2</sup> value in the Hispanic model achieved statistical significance and the African American model only proved marginally more reliable.

The poor performance of the SUS models, in relation to the UC model, may be explained by the fact that the SUS is the only



public postsecondary education system in Florida. In California, the UC only receives the top 12% of California high school graduates. This admissions criterion is more akin to the highly selective institutions of The Shape of the River, and the UC and C&B institutions are particularly lack undergraduate diversity. This is the simple conclusion drawn from the fact that minorities are more likely to be underrepresented at the more selective institutions.

The SUS is fundamentally different from these selective schools, as its institutions admit students of all academic histories to its institutions; although some institutions are more selective than others. For these less selective institutions, there is an increased likelihood that an underrepresented minority student will be admitted at one or more of its institutions. In the UC, the admissions criteria are more stringent and the process more competitive, a combination that results in lower admission rates for all racial groups but especially for underrepresented minorities. However, these criteria result in the admittance of underrepresented minorities to one or more institutions in the university system. Therefore, the regression results for these two models confirm Bowen and Bok's contention that affirmative action does not have a significant impact on non-selective or moderately selective institutions.

In order to determine if Florida's most selective institutions were adversely affected by the One Florida Initiative, I examined the admission rates at the University of Florida (UF) and Florida State University (FSU), the two most selective institutions in the SUS.<sup>19</sup> In order to determine if Florida's most selective institutions were adversely affected by the One Florida Initiative, I examined the admission rates at the University of Florida (UF) and Florida State University (FSU), the two most selective institutions in the SUS. The only possible method by which to analyze these admission rates is through the use of trend data. Despite the obvious weaknesses of such an approach, which have been previously enumerated, it is not feasible to conduct a regression analysis upon only two cases. The trend data indicate that, in both the UF and FSU cases, African American and Hispanic admission rates had declined in the years preceeding the implementation of the One

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<sup>19</sup>These two institutions were selected as they were the only SUS institutions in the second tier of the U.S. News and World Report college rankings. The remaining universities were in the third tier or lower. It should be noted that amongst the eight UC campuses studied; only two were placed as low as the second tier. Consequently, this attempt to create a SUS sample that is equitable to the UC sample cannot be achieved.

Florida Initiative. Chart V contains the admission rates at the UF while Chart VI displays the same information for FSU.

Chart V: University of Florida Admission Rates by Disadvantaged Minority, 1995-2001

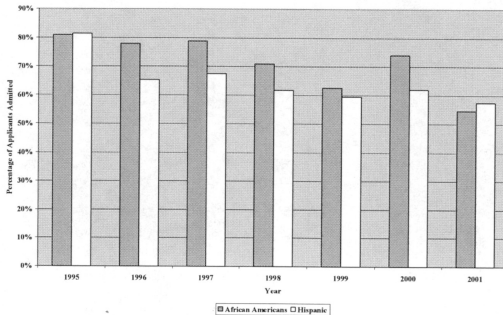
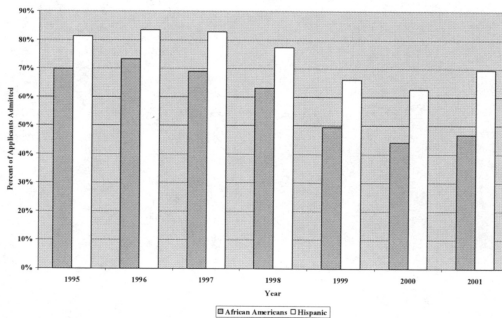


Chart VI: Florida State University Admission Rates by Disadvantaged Minority, 1995-2001



At the UF, both groups experienced an increase in admission rates in the 2000-01 admissions cycle which was the first year of the Talented 20 plan.<sup>20</sup> The African American admission rate rose sharply from 63% in 1999-2000 to 74% in 2000-01. In the second admission cycle under the Talented 20 plan, the African American admission rate, at 55%, was lower than the last cycle with affirmative action. The Hispanic admission rate demonstrated a similar trend; the admission rate initially rose to 62% in 2000-01 from 59% in 1999-2000. However, it fell to 57% during the second year of the Talented 20 plan. The overall fluctuations in both underrepresented minority's admission rates undermines the confidence in conclusions based upon them. However, it is readily apparent that the increased admission rates of the first Talented 20 class were not sustained at the UF. On this basis it is possible to conclude that

<sup>20</sup> The Talented 20 plan is the percentage plan at the SUS. Under the Talented 20 plan, the top 20 percent of a high school's students are automatically granted admission to a SUS university as long as they have taken specific courses.

future applicants stand no better chance of admission than they did under the previous affirmative action program.

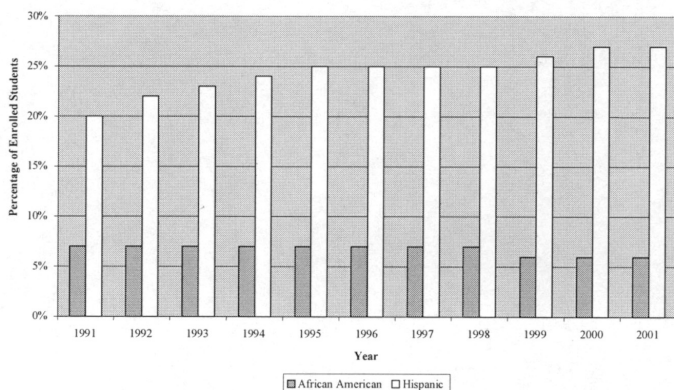
FSU also indicates that both African American and Hispanic admission rates have declined over the seven year study period. However, this trend does not hold for the Hispanic admission rates during the two percentage plan admission cycles. The African American admission rate falls from 49% in 1999-2000 to 44% in 2000-01 while the Hispanic admission rates correspondingly fall from 66% to 63%. However, both groups experience an increase in their admission rates in the second year of the Talented 20 plan. While the African American admission rate rose to 47%, the admission rate was still lower than the last year under affirmative action. The Hispanic rate rose to 70%; a level which was higher than the last year with affirmative action.

It is clear that the implementation of the Talented 20 plan has not resulted in an increase in the percentage of underrepresented minority students admitted to the two most selective SUS institutions. In three of the four increases in admission rates, the results were either did not occur in the following year or did not restore admission rates to their pre-percentage plan levels. These observations must be taken in the context of an overall decline in African American and Hispanic admission rates. This situation mitigates both observations in that the post-policy shift decline in admission rates is not disproportionately large when compared to other admission cycles. While African Americans and Hispanics have not enjoyed an improved chance to attend the best SUS institutions, their options do not seem to have been adversely affected. The conclusion that percentage plans may have, at best, mildly affected underrepresented minority rates in an adverse manner is still not comparable to the UC conclusion. The UC institutions were nearly all in the top tier of the U.S. News and World Report rankings; an indicator of their selectivity. The most selective public institutions in Florida were not in the top tier. It is consequently unlikely that they would yield clear results in the manner of the UC case.

The UC and SUS enrollment factor regression models suggest that a decline in the admission rate of underrepresented minority students could have serious ramifications. For both African Americans in the UC system and Hispanics in the SUS, the diversity of a university's undergraduate student body is the most important factor in the decision of a potential student to enroll. A decline in the admissions to these universities, when followed by a subse-

quent decrease in enrollments, would result in a corresponding decline in the underrepresented minority population. This decline would negatively impact the enrollment decision of future students; a scenario which would result in a rapidly diminishing minority population at a specific university. Curiously, the diversity in a university's undergraduate body is not important to Hispanics in the UC system and African Americans in the SUS. This unexpected result may be partially explained by the exclusion of FAMU, a historically Black university, as well as the exclusion of five other universities due to incomplete data. Another possible explanation is that the more established an underrepresented minority was, the less likely affirmative action was an effective aid to increase undergraduate diversity. A more established minority group would be more likely to pursue higher education and occupy a position where they would be more familiar with educational opportunities. In both university systems studied here, the two deviant cases would be the more established underrepresented minority group. College-going rates, to California's public postsecondary institutions, support this trend when observed for a decade. While Hispanic students became an increasingly large percentage of FTIC students, African Americans continued to account for roughly 7% of all FTIC students. Further investigation into this relationship, including an analysis with similar data from the SUS, is needed to test adequately this hypothesized relationship.

Chart VII: FTIC Students in California Public Postsecondary Education by Racial Group, 1991-2001\*



\*Data obtained from the California Postsecondary Education Commission.

Another important factor in the diversification of higher education institutions is the financial aid available to underrepresented minorities. The positive and significant beta weights for the mean Pell grant award were either the largest or second largest in the admission model. This situation implies that while minority students may apply to a university, they will not attend the university unless they are offered a specific level of financial aid. The mean Pell grant award is admittedly a measure that does not precisely capture the concept of family income; it provides a reliable estimation of the percentage of students who are from a low-income background. The negative direction of these two measures in both the UC and SUS enrollment factors models seemingly contradicts these conclusions. This discrepancy could likely be eliminated if more precise variables, such as family income, were used.

Additionally, the conclusions drawn from the mean Pell grant award variable suggest that the removal of minority scholarships from universities will negatively affect the number of minority students. The trend for colleges and universities to consider an entire student body for formerly group-specific scholarship and grant programs has become pronounced since the minority scholarships were determined to be unconstitutional in *Podberesky v Kirwan*, (38 F.3d 147). These implications are of particular importance as the Supreme Court considers the *Grutter* and *Gratz* cases.

I feel obligated to include a cautionary note as a conclusion to this paper given the recent decision by the Supreme Court to hear the cases against the University of Michigan and the ensuing public debate. The models described above are no more than an initial attempt to ascertain whether the efficacy of affirmative action was universal and if it resulted in conditions favorable to minority enrollment. Proxy variables were used in some circumstances, notably socioeconomic status, along with the inability to control for the precise political and social atmosphere at the time of two very public policy shifts. In sum, this research is similar to most social science research; it raises far more questions than it ultimately answers.

Appendix A  
University Systems and Their Corresponding Institutions

University of California (UC)

UC-Berkeley  
UC-Davis  
UC-Irvine  
UC-Los Angeles  
UC-Merced<sup>1\*</sup>  
UC-Riverside  
UC-San Diego  
UC-San Francisco<sup>2</sup>  
UC-Santa Barbara  
UC-Santa Cruz

State University System of Florida (SUS)

Florida A&M University<sup>3\*</sup>  
Florida Atlantic University  
Florida Gulf Coast University<sup>4\*</sup>  
Florida International University  
Florida State University  
New College of Florida<sup>5\*</sup>  
University of Central Florida  
University of Florida  
University of North Florida\*  
University of South Florida\*  
University of West Florida\*

\*Denotes universities or colleges not included in the study. With the exception of the footnoted universities, all universities with an asterisk were removed from the enrollment factors model on account of incomplete data.

<sup>1</sup>UC-Merced is a new campus and will not accept students until Fall 2003.  
<sup>2</sup>UC-San Francisco is an exclusive health sciences campus.  
<sup>3</sup>FAMU, a historically Black university, was not included in the One Florida Initiative.  
<sup>4</sup>FGCU did not enroll students until Fall 1997.  
<sup>5</sup>NCF did not enroll students until Fall 2000.

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## **Appendix B**

### **Methodology**

#### **PERCENTAGE OF STUDENTS RECEIVING PELL GRANTS**

I only considered domestic undergraduate students when construction this variable, as there is a smaller number of graduate students who receive Pell grants as well as the fact that international students are ineligible for Pell grants. Additionally, the presence of graduate students in the sample would not be applicable, as I am only considering the effect of affirmative action on undergraduate admissions. The formula for determining the percentage of undergraduate students was Pell grant recipients was established as the:

Total number (N) of undergraduate recipients  
(Total N of undergraduate students – N of international undergraduate students)

The UC Pell grant data was either retrieved from the UCOP website or was provided to me by Chris Carter of the University of California Office of the President's Student Academic Services Department. The SUS information was retrieved from the website of the Florida Department of Colleges and Universities.

#### **REPLACEMENT OF MISSING VALUES**

In the UC case, the admission rates were unavailable for the 1994-95 cycle. This necessitated the use of estimated values, the first in the series, for the change in [appropriate racial group] admission rate dependent variable. I replaced these missing values using the data transformation function in SPSS. The campus' data set was placed on a separate database to avoid contamination of the transformation procedure. The missing values were estimated using the linear trend at point function in SPSS, which is suitable method for replacing missing first or last cases in a variable. A linear regression model is used to regress the existing cases upon an index variable. From this model, the estimated value of the missing case is extrapolated and inserted into the data set. More information may be found in:

SPSS, Inc. (1999). SPSS Base 10.0 User's Guide. USA: author.



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