

PROBABILITY OF FIRST-TIME FRESHMAN ADMISSION BY RACE AND GENDER
AT A LARGE PREDOMINANTLY WHITE LAND GRANT RESEARCH UNIVERSITY IN
THE YEARS 1994-1998

By

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ABSTRACT

The purpose of this study was to investigate the probability that race was a factor in the admissions process at Virginia Tech. The study was conducted in three parts. In the first part, logistic regression was used to develop a probability of admission model for eight demographically distinct groups for the years 1994-1998 using information that was presented to the university by all first-time freshman applicants considering grade point average (GPA), scholastic aptitude tests (SAT), high school rank (HSR), requested major (RM), gender and race. The eight demographic groups were: African American men (BM), African American women (BF), Asian American men (AM), Asian American women (AF), Hispanic American men (HM), Hispanic American women (HF), white American men (WM), and white American women (WF). The Bonferroni correction and the

Wald tests were carried out to determine significance in the observed differences.

Significant differences were found. The two African American groups and the white female group were found to have significantly higher probabilities of getting accepted than other groups while the two Asian groups were found to have the least probability of getting accepted. The null hypothesis that there was no difference between the groups with regard to probability of getting accepted was thus rejected. GPA was found to be the most important admission criteria followed by SAT scores. The admissions criteria were found to be important for all applicants regardless of group membership. Between group differences detected in the study was mainly the result of differences in cut-off points.

The second part of the study involved evaluating the reasons that were given for rejection of admission in 1998. A stratified sample of 400 was randomly selected. The chi-square test was used to determine if there were differences between the eight groups with regard to reasons given for rejection. The frequency with which the reasons were given was also examined. It was found that there were no differences between the groups and, therefore, the null hypothesis was confirmed. GPA related reasons were the most cited for rejection followed by SAT scores. This was consistent with the finding in the first part

of this study that GPA and SAT were the most important admission criteria

In the third part of the study, the director of admissions and the deputy director of admissions for freshman admissions were interviewed. It was determined from them that affirmative action did not influence the university's admissions decisions but that race was "one of the many factors considered during the admissions process."

Based upon the finding in the first part of this study that the two African American groups consistently had the highest probabilities of acceptance in the five years under study, it was concluded that the use of race was intended to benefit applicants from the two groups. This conclusion was further based on the information collected from the interview with the admissions officers which suggested that Affirmative action in the state of Virginia applied only to African Americans and also that there were targeted goals in the state intended to increase the number of African Americans in the state's public higher education institutions. The admissions officers could, however, not provide any references to support this information. Consultations with a professor at the university and the university's vice president for multicultural affairs suggested that there was no state mandate or requirement that public institutions in the state adopt targeted goals as a means of

increasing the number of African Americans in the state's public higher education institutions. They also doubted that affirmative action could be applied to one ethnic group only. It was concluded, however, that since the admissions officers made these assertions during the interview, these perceived state requirements may have led them to deliberately seek to increase the number of African American students accepted by the university and that these deliberate efforts may have been behind the high probabilities of the acceptance of students from the two African American groups.

The fact that the admissions officers may have deliberately sought to increase the number of African Americans on the campus to satisfy perceived state mandates or requirements and the finding in the first part of this study that the two African American groups consistently had the highest probabilities of getting accepted by the university in the five years under study suggested that admission to the university was not race blind. It was also concluded that since external pressure may have been the cause of the high probabilities for the African American groups, admission to the university was not entirely the prerogative of the university.

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The writing of this thesis could never have been a success without the contribution, in different ways, of the members of my thesis committee and my professors in the College Student Affairs program. Don Creamer was just a great advisor. It was only through a combination of his patience, advice, confidence in me, and encouragement, that I was able to successfully write this thesis and, therefore, graduate.

Gerry McLaughlin's suggestion that I also examine reasons given for rejection of first-time freshman applicants and qualitative data that could explain how the admissions officers at Virginia Polytechnic Institute and State University decide on who to accept and who to reject turned out to be very helpful in explaining the reasons for the differences in probabilities of admission that were detected. His thorough comments and advice on the methodology and appropriate language use helped bring the document to its current form.

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higher education professionals we would be expected to be agents of change that could bring about change from policies and practices that have traditionally favored homogeneous student populations to those that would accommodate heterogeneous student populations. This emphasis inspired my decision to select this topic. To you all I am very thankful!

Dedication

This thesis is dedicated to several people whose continued confidence, expressed or tacit, in my ability to succeed academically and professionally has been, and will always remain, my source of inspiration. They include my parents, Pitalis and Alice Nyajeri, who though of little education and low income, by choice sacrificed the little niceties of life that they could have otherwise afforded, for the sake of my and my brothers' primary and secondary education which turned out to be a good foundation for my pursuit of higher education years later.

My wife, Syvil, and children, Deborah, Thomas, and Lucy, all paid the price of my higher education when they gave up hours of sleep, play or relaxation which rightly belonged to them in order to participate with me in the work program which paid 95% of my undergraduate tuition and fees and had to endure several years of my absence when they remained in Kenya while I worked on my masters program in the United States.

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Table of Contents

Title Page	i
Abstract	ii
Acknowledgment	vi
Dedication	viii
List of Tables	xiv
Introduction	1
First Time Freshman Admissions at Virginia Polytechnic Institute & State University	5
Purpose of Study	6
Research Question	7
Null Hypotheses	7
Limitations of the Study	7
Definitions of Terms	8
Review of Related Literature	9
Historical Background of Race and Higher Education Admissions	9
Minority Disadvantage Versus White privilege	14
Affirmative Action and Higher Education Admissions	15
The Original Goal of Affirmative Action	17

The Current Goal of Affirmative	
Action	19
Affirmative Action and the Admissions	
Criteria	19
The Courts and Affirmative Action	
In Higher Education Admissions	23
Conclusion	25
Method	29
The Sample	29
Data Collection	30
Data Analysis	32
Example of Tests of Significance	35
Results	41
Proportions of the Application	
Pools by Race and Gender	41
Logistic Regression Analysis and	
Tests of Significance Findings	44
Other Findings	52
Comments	53
Reasons for Rejection	57
Description of the Sample	57
African American Men	57
African American Women	58
Asian American Men	58

Asian American Women	58
Hispanic American Men	59
Hispanic American Women	59
White American Women	59
White American Men	59
Rejection Reasons and the Groups	62
Comments	62
Results of the Interview	62
Comments	68
Discussions, Conclusions, Implications And Recommendations For Further Study	71
Policies versus Practices	72
Admissions Criteria	78
Conclusion	79
Implications	80
Recommendations For Further Study	88
References	90
Appendix	95
Resume	105

List of Tables

Table 1

Observed Frequencies of Reasons that were given for Rejection of Applicants in 1998 by Race/Gender Group and Admission Criteria 39

Table 2

Numbers and Percentages of all Applicants by Race/Gender Groups and Year 42

Table 3

Numbers and Percentages of the Applicants that were Accepted and those that were rejected by Race/Gender Group and Year 43

Table 4

Admission Probabilities Given GPA = 2.5, SAT Math = 550, SAT Verbal = 550, Class Percentile = .1, Requested Major = 0 by Year and Race/Gender Group 47

Table 5

Admission Probabilities Given GPA = 2.5, SAT Math = 550, SAT Verbal = 550, Class Percentile = .1, Requested Major = 1 by Year and Race/Gender Group 48

Table 6

Results of Significance Tests for the Observed Probabilities of Admission by Race/Gender Group and Year 49

Table 7

P-Values of Significance Tests Results for the Observed Probabilities of Admission by Race/Gender Groups and Year 50

Table 8

Significance Test Results for the Probabilities of Admission that were found Significant at .0001 (overall alpha = .05) and .0018 (overall alpha = .10) by Race/Gender Group and Year 51

Table 9

Rankings of Race/Gender Groups by Coefficient and Year (The More Negative the Coefficient, the Higher the Probability of Acceptance) 54

Table 10

Description of the Stratified Samples of Applicants Rejected in 1998 by Race/Gender Group and Number of Applicants in Given GPA Ranges 60

Table 11

Description of the Stratified Samples of Applicants Rejected in 1998 by Race/Gender Group and Number of applicants in Given Combined SAT Math and SAT Verbal Scores Ranges 61

