

Data Visualization 01: UC Berkley

The Numbers Don't Lie - Sort of

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Introduction

In 1973, UC Berkeley was sued for gender bias, because their graduate school admission figures showed obvious bias against women. Let's travel back in time. You have been appointed as a statistical expert to analyze the admissions data and determine whether there is, in fact, bias in the university's admissions.

Total Admission Rates

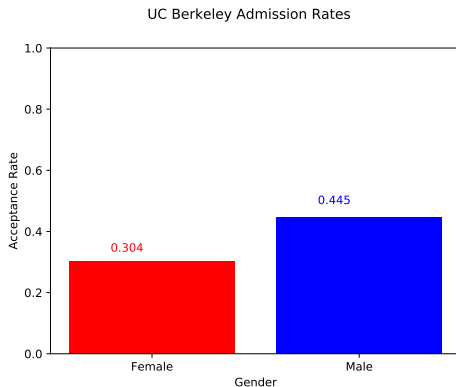


Figure: This figure shows the overall acceptance rate into graduate programs for the top departments at UC Berkeley for the year 1973. From the overall results, it clearly shows that males have a 14% better chance of getting accepted to the university than their female counterparts. Since the numbers don't lie, we can just pack it up and call it a day right?

Admission Rates Across the Top Departments

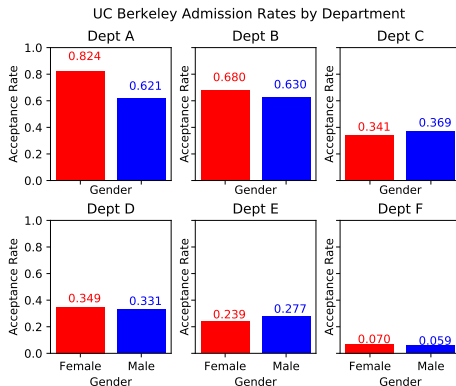


Figure: This figure shows the individual acceptance rate into graduate programs for the top departments at UC Berkeley for the year 1973. In contrast with the overall trend, the rates for the individual departments seem to actually favor females across the majority of the selected departments.

Admission Rates Across Departments (Cont'd)

Department	Female %	Male%
A	82.4	62.1
B	68.0	63.0
C	34.1	36.9
D	34.9	33.1
E	23.9	27.7
F	7.0	5.9

Table: The table above shows the numerical results of the previous slide. The contradictory results between the overall and cross-department admission rates show that the two different populations of applicants have different trends when taken separate from the aggregate data, which means there are likely unexplained causal factors influencing the outcomes.

Cross-Department Admission Statistics

	Female %	Male %
Mean	42	38
Standard Deviation	28	22

Table: The mean and standard deviation between the acceptance rates for the male and female populations show that there is no significant difference between the graduate admission rate for females and for males. Based on the results, it seems unlikely that UC Berkeley engaged in gender discrimination in its graduate admissions process during that year.