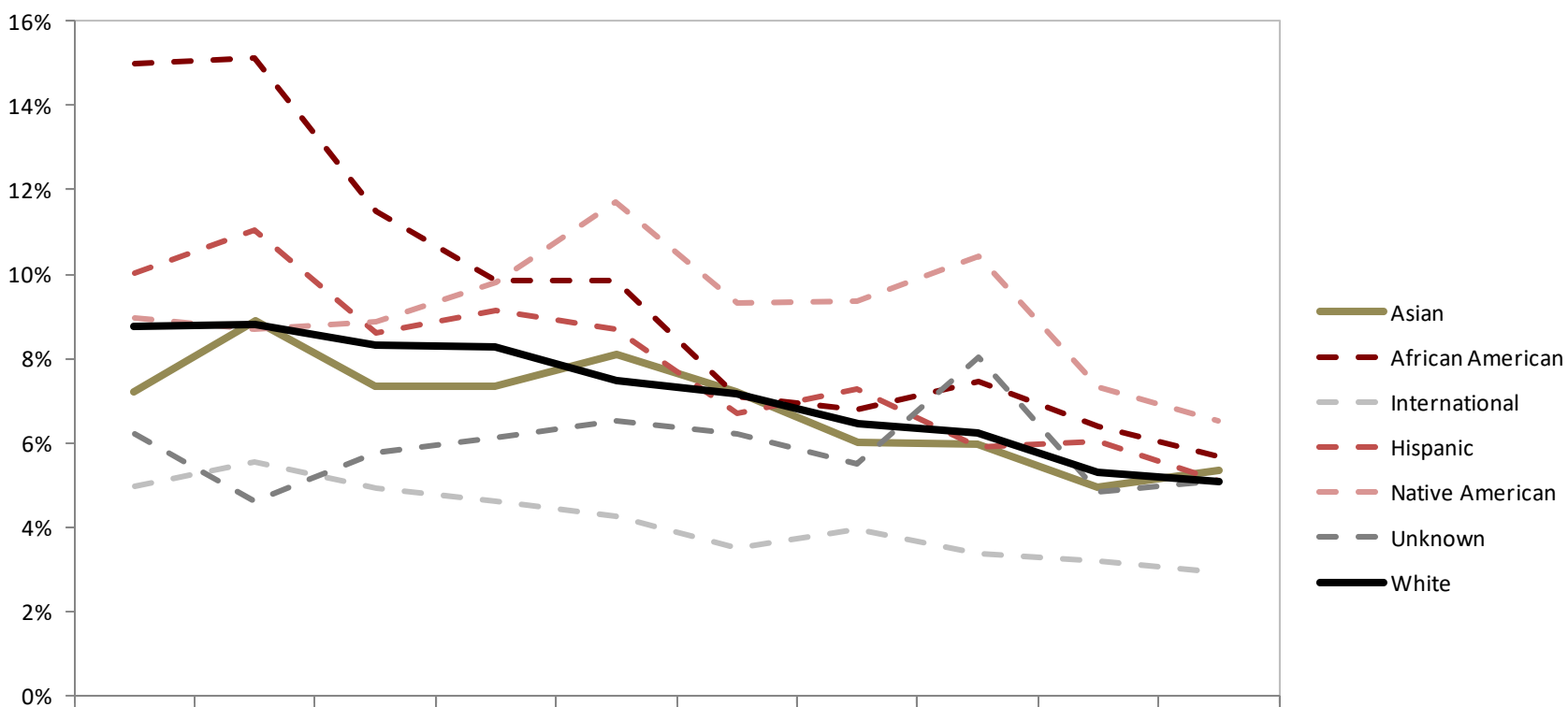# Admissions Part II
Subtitle

February 14, 2012

Office of Institutional Research

- Athletes and Legacies explain the difference in raw admit rates for Asian and White applicants.

- Asian applicants have higher average ratings and test scores (excluding the personal rating).

- Differences exist in the raw admit rates of Asian and White students with similar test scores and academic indices. Even top scores and ratings don't guarantee admission.

- Personal rating is important in models of the admissions process and drive some of the demographic differences we see.

Admit Rates by Ethnicity, Classes of 2007-2016
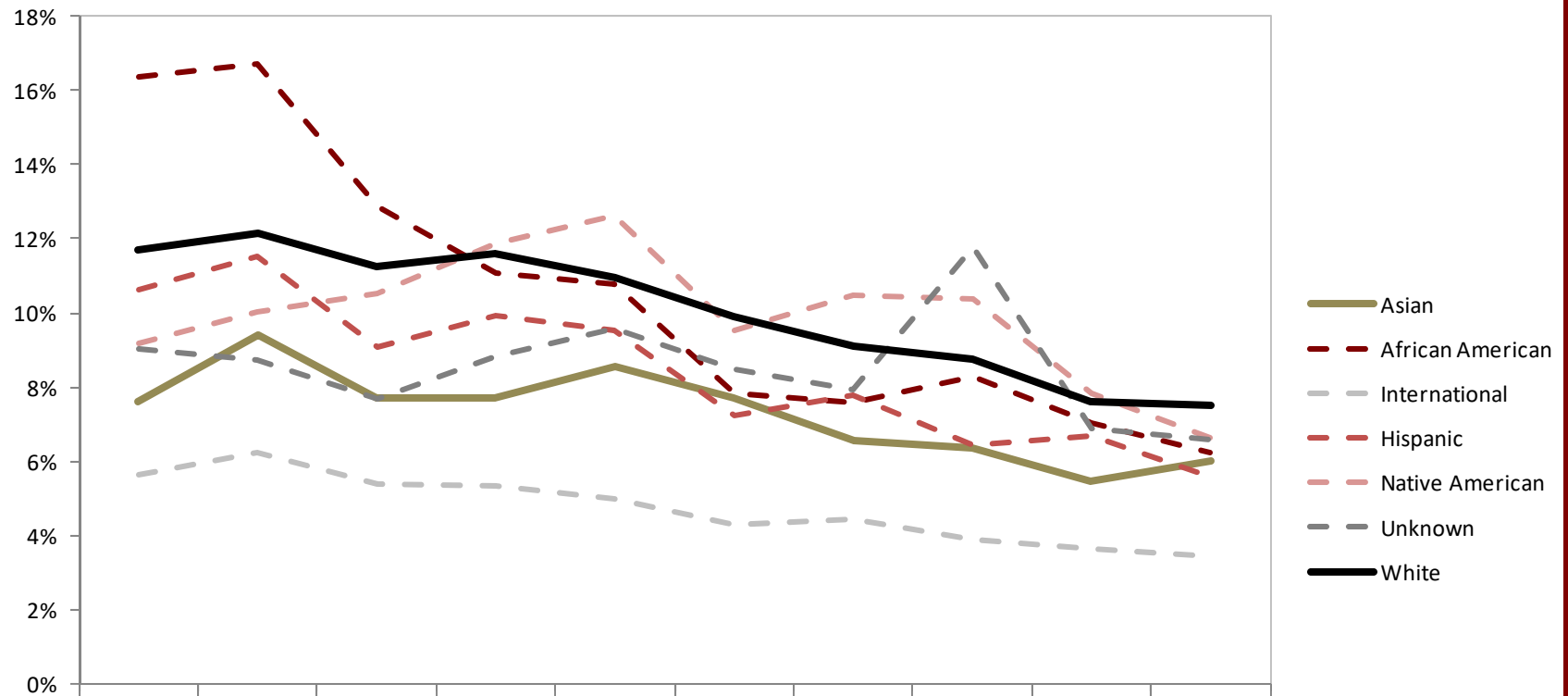
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Admit Rate -White	7.60%	9.39%	7.72%	7.71%	8.56%	7.72%	6.57%	6.36%	5.45%	6.02%
Admit Rate -Asian	11.69%	12.13%	11.27%	11.58%	10.94%	9.93%	9.11%	8.76%	7.58%	7.50%
Difference	4.09%	2.74%	3.55%	3.88%	2.38%	2.21%	2.54%	2.40%	2.14%	1.48%

Legend:
- Asian
- African American
- International
- Hispanic
- Native American
- Unknown
- White

Non-Legacy, Non-Athlete Admit Rates by Ethnicity, Classes of 2007-2016

Legend:
- Asian
- African American
- International
- Hispanic
- Native American
- Unknown
- White

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Admit Rate -White	7.21%	8.90%	7.34%	7.34%	8.09%	7.21%	6.00%	5.96%	4.93%	5.34%
Admit Rate -Asian	8.75%	8.79%	8.30%	8.26%	7.46%	7.17%	6.46%	6.25%	5.32%	5.09%
Difference	1.54%	-0.12%	0.96%	0.93%	-0.64%	-0.04%	0.46%	0.29%	0.38%	-0.25%

Difference in Average Test Scores and Ratings for White and Asian Applicants


White Higher   **Asian Higher**
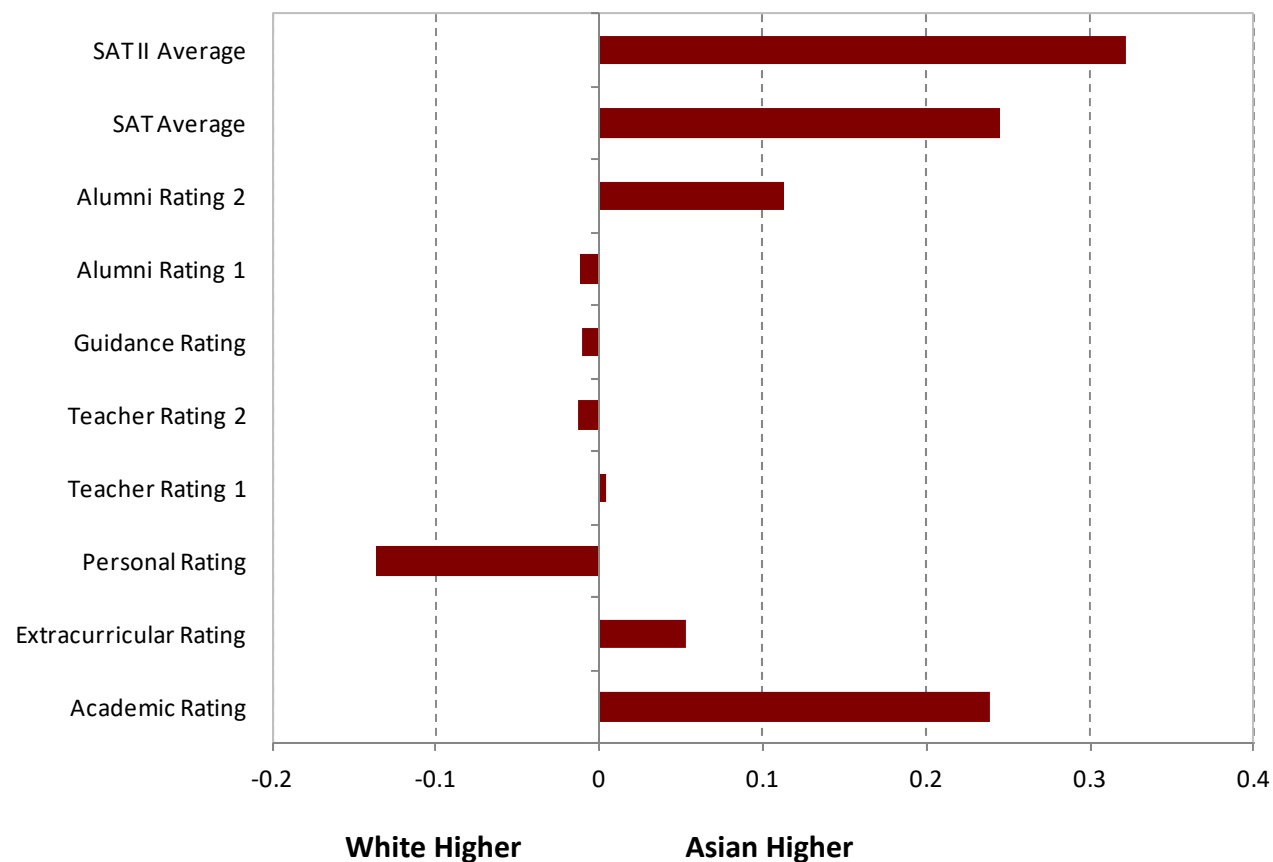
Notes:
- Excludes legacies and athletes.
- OIR doesn't have all ratings for all years, so number of applicants differs for each rating/test score.
- Differences are in standard deviations.

Admit Rates by Academic Index for White and Asian Applicants, Classes of 2007-2016

White N

White Admit Rate

Asian N

Asian Admit Rate

Standardized Academic Index (0 = Average Academic Index)

Legend:
- asian(N)
- white(N)
- white
- asian
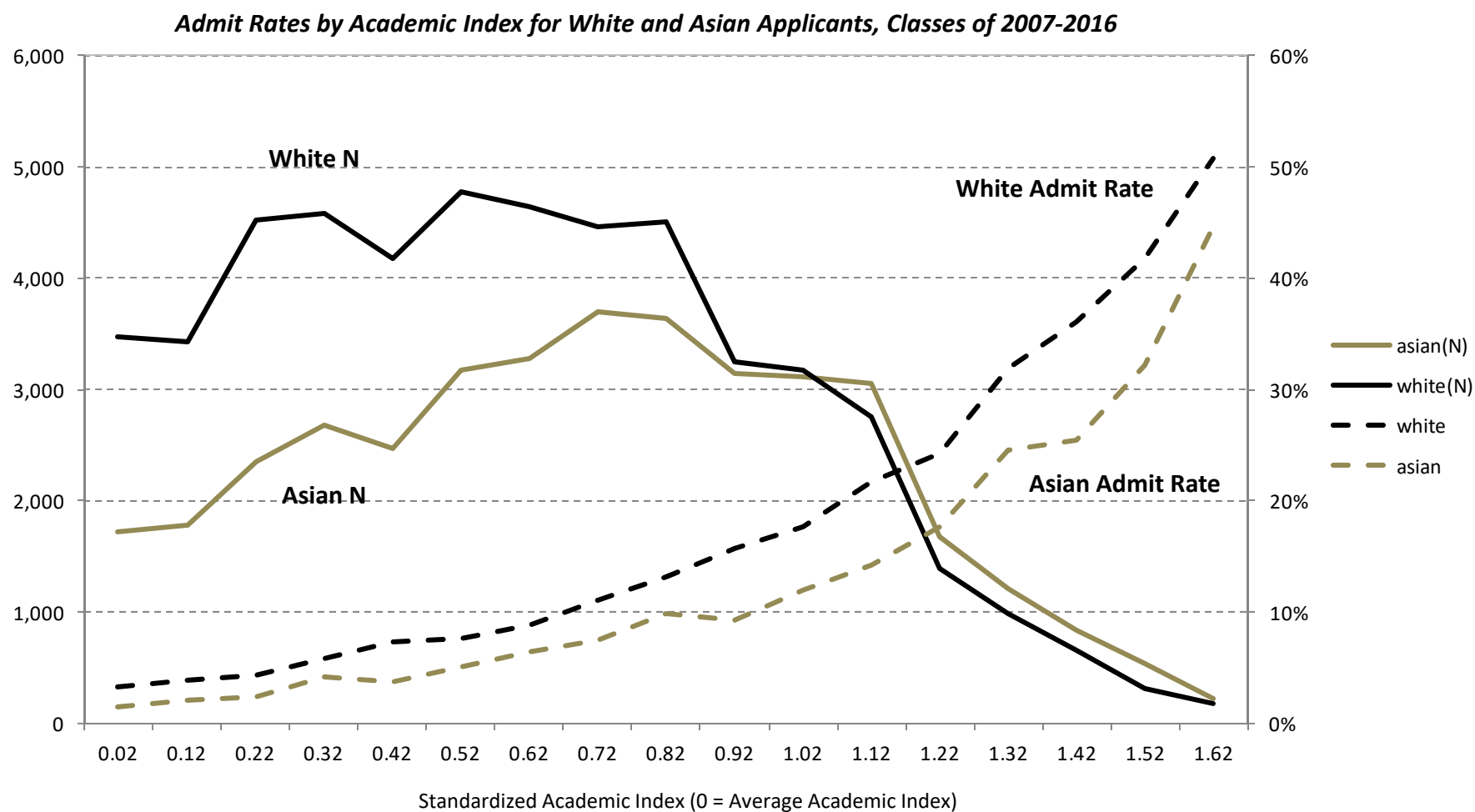
Notes:
- Excludes legacies and athletes.
- Academic Index doesn't account for everything in admissions process. Even top rated students barely have a 50% admit rate.
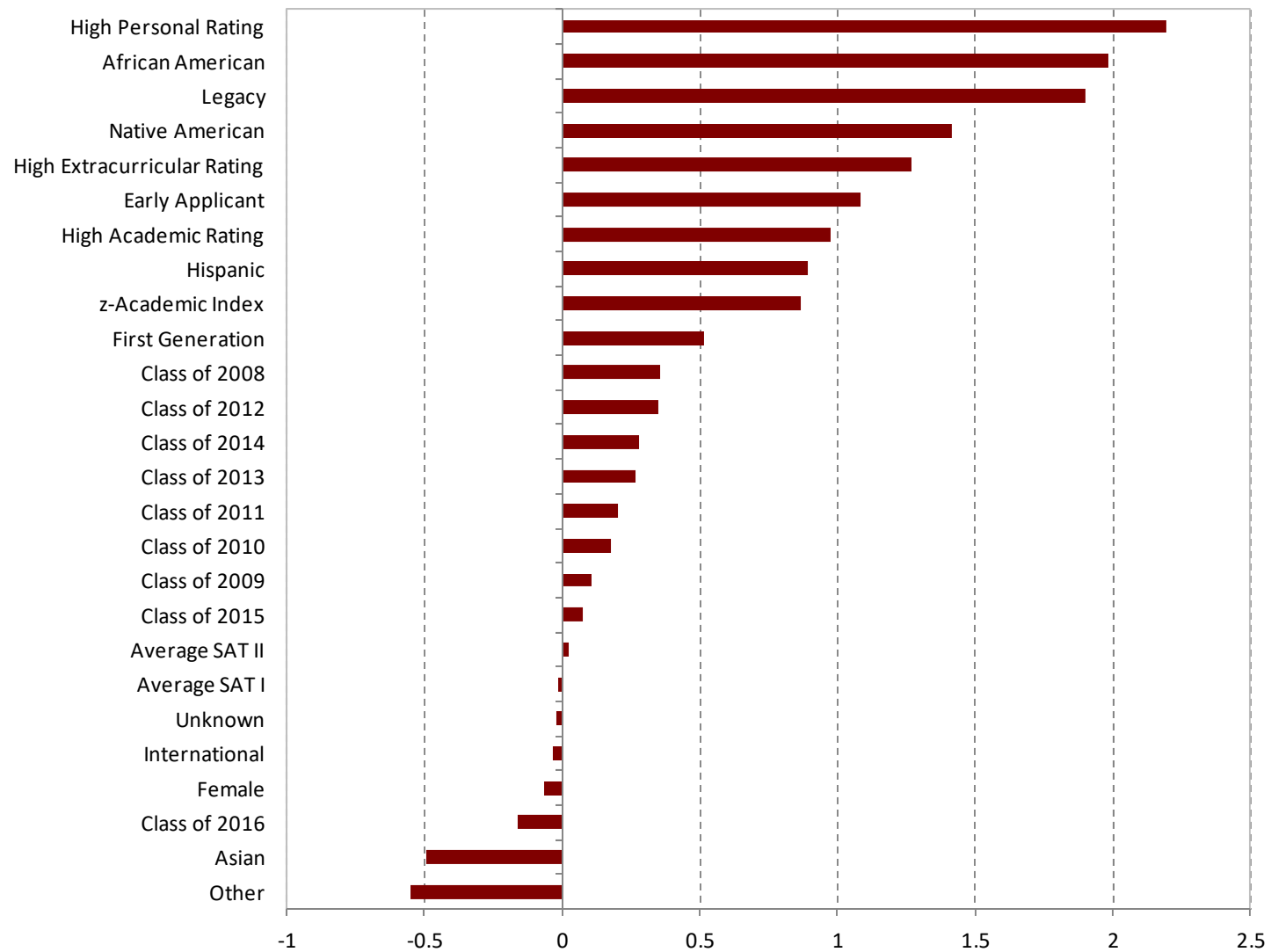
Admit Rates by Average SAT I for White and Asian Applicants, Classes of 2007-2016
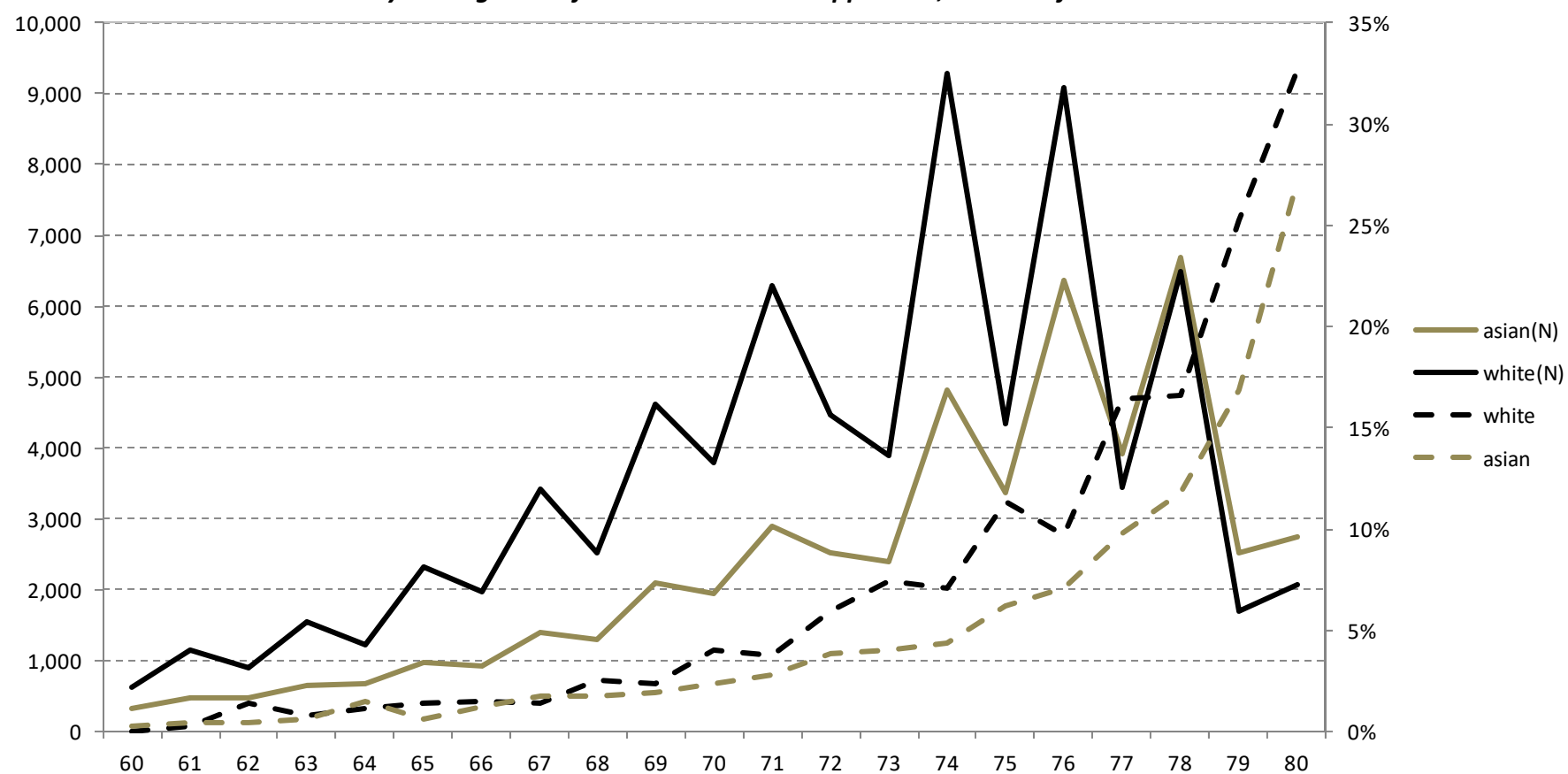
Notes:
- Excludes legacies and athletes.
- Spikiness in distribution due to rounding averages to integers.

Odds Ratios for Main Effect Logistic Model
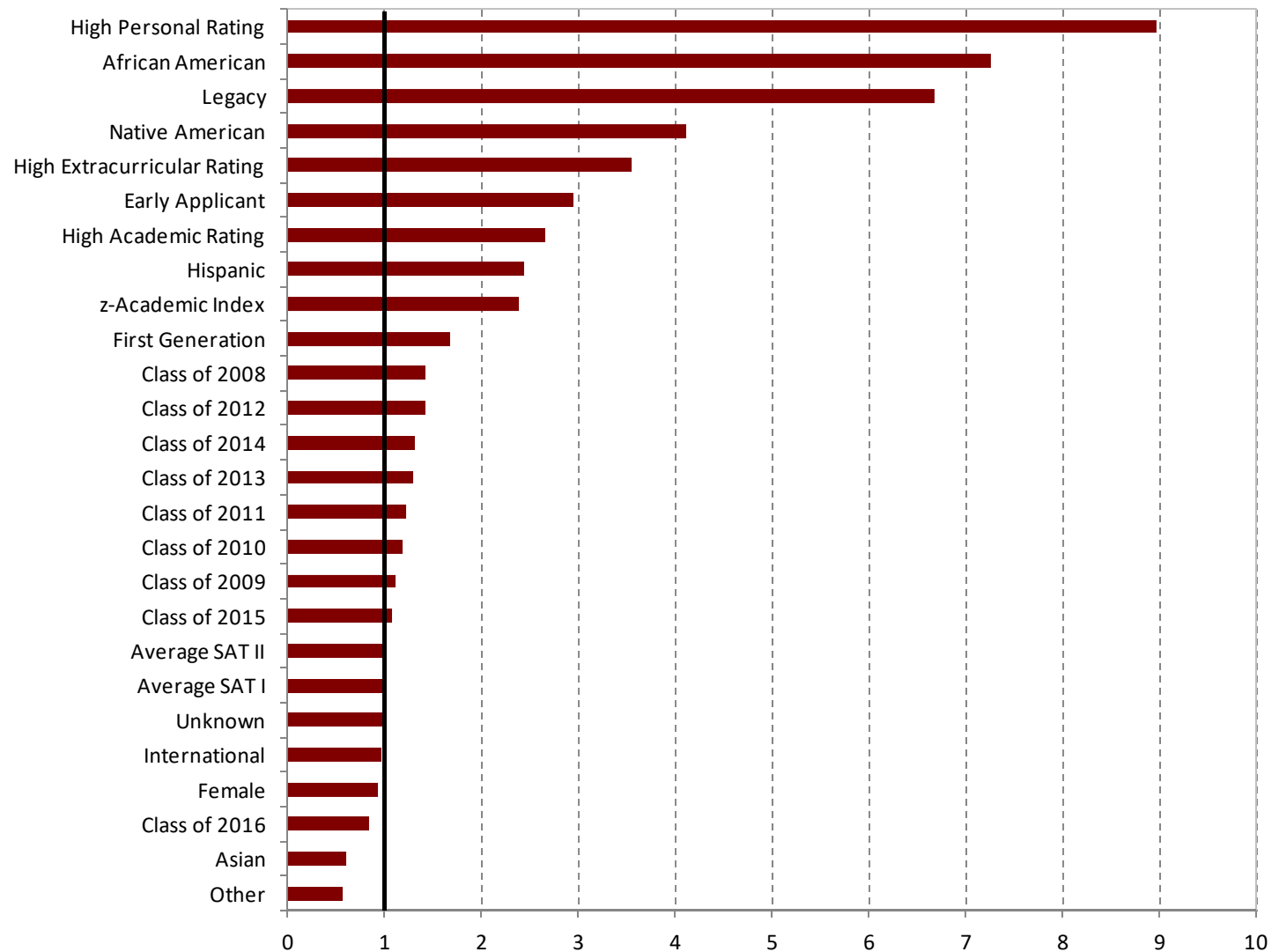
Logit Coefficients for Main Effect Logistic Model

Methods

Goal: Using various admissions ratings, how well can we approximate admit rates by race/ethnicity and the demographic composition of the admitted students pool?

Strategy:
- Fit a series of basic logistic regression models.

- Generate fitted probabilities of admissions - given an applicant's characteristics how likely are they to be admitted (0-1)?

- For each class, select the 2100 applicants with the highest probability of admissions as our simulated admitted class.

- Examine resulting demographics and admit rates by ethnicity.

Notes:
- Students with no academic index are excluded from this analysis. N = , admit rate =

Model 1: Academic only	Model 2: Add legacy and athlete	Model 3: Add personal and extracurricular	Model 4: Add demographics
Academic Index	Academic Index	Academic Index	Academic Index
Academic Rating	Academic Rating	Academic Rating	Academic Rating
	legacy	legacy	legacy
	athlete	athlete	athlete
		Personal Rating	Personal Rating
		Extracurricular Rating	Extracurricular Rating
			Gender
			Ethnicity

Projected Admitted Student Pools
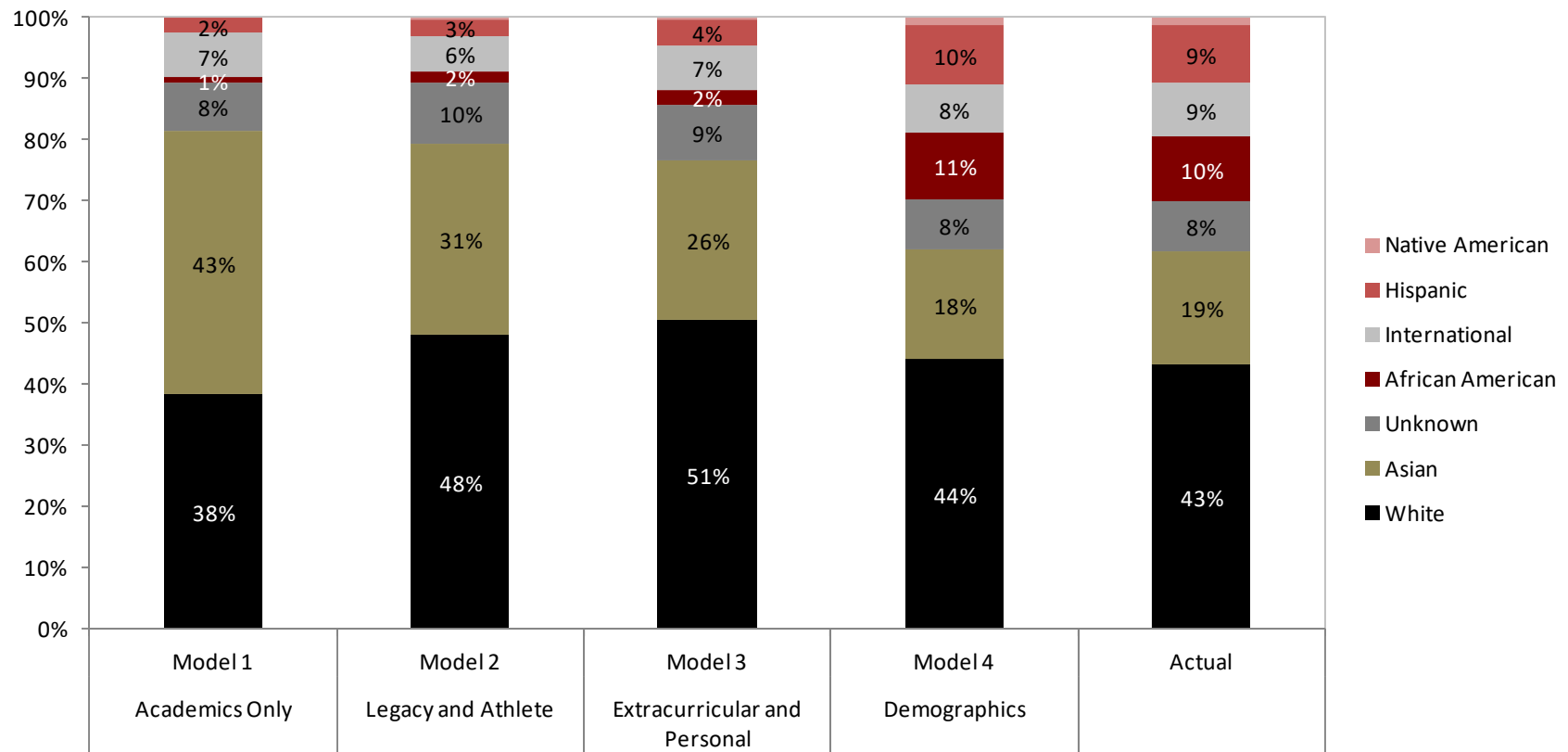
	Academics Only	Legacy and Athlete	Extracurricular and Personal	Demographics	
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Actual**
Asian	43.04%	31.40%	25.99%	17.97%	18.66%
African American	0.67%	1.83%	2.36%	11.12%	10.46%
International	7.27%	5.86%	7.39%	7.68%	8.90%
Hispanic	2.42%	2.62%	4.07%	9.83%	9.46%
Native American	0.21%	0.32%	0.41%	1.21%	1.23%
Unknown	8.02%	9.93%	9.14%	8.11%	8.09%
White	38.37%	48.03%	50.63%	44.08%	43.21%
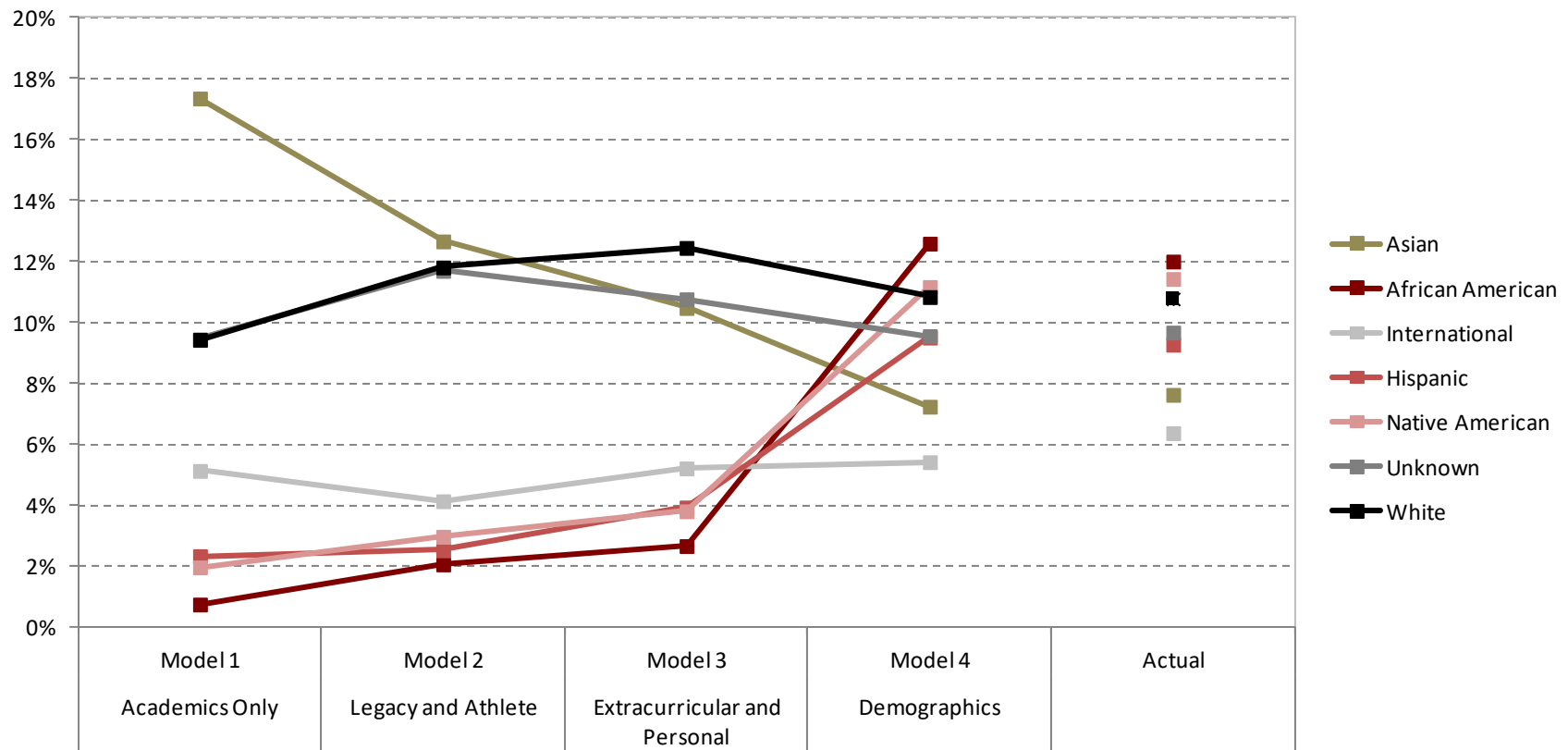
	Academics Only	Legacy and Athlete	Extracurricular and Personal	Demographics	
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Actual**
Asian	17.35%	12.66%	10.48%	7.24%	7.63%
African American	0.75%	2.07%	2.67%	12.59%	12.00%
International	5.13%	4.14%	5.22%	5.42%	6.37%
Hispanic	2.34%	2.53%	3.94%	9.51%	9.27%
Native American	1.97%	2.98%	3.81%	11.17%	11.43%
Unknown	9.45%	11.70%	10.77%	9.56%	9.67%
White	9.43%	11.81%	12.45%	10.84%	10.77%

Conclusions

Inputs

Outputs

SAT Scores

Reader classifies student → Academic Rating

GPA

Calculation performed → Academic Index

Alumni Interview

Teacher Ratings

Reader classifies student → Personal Rating

Guidance Counselor Ratings

Application Essay?
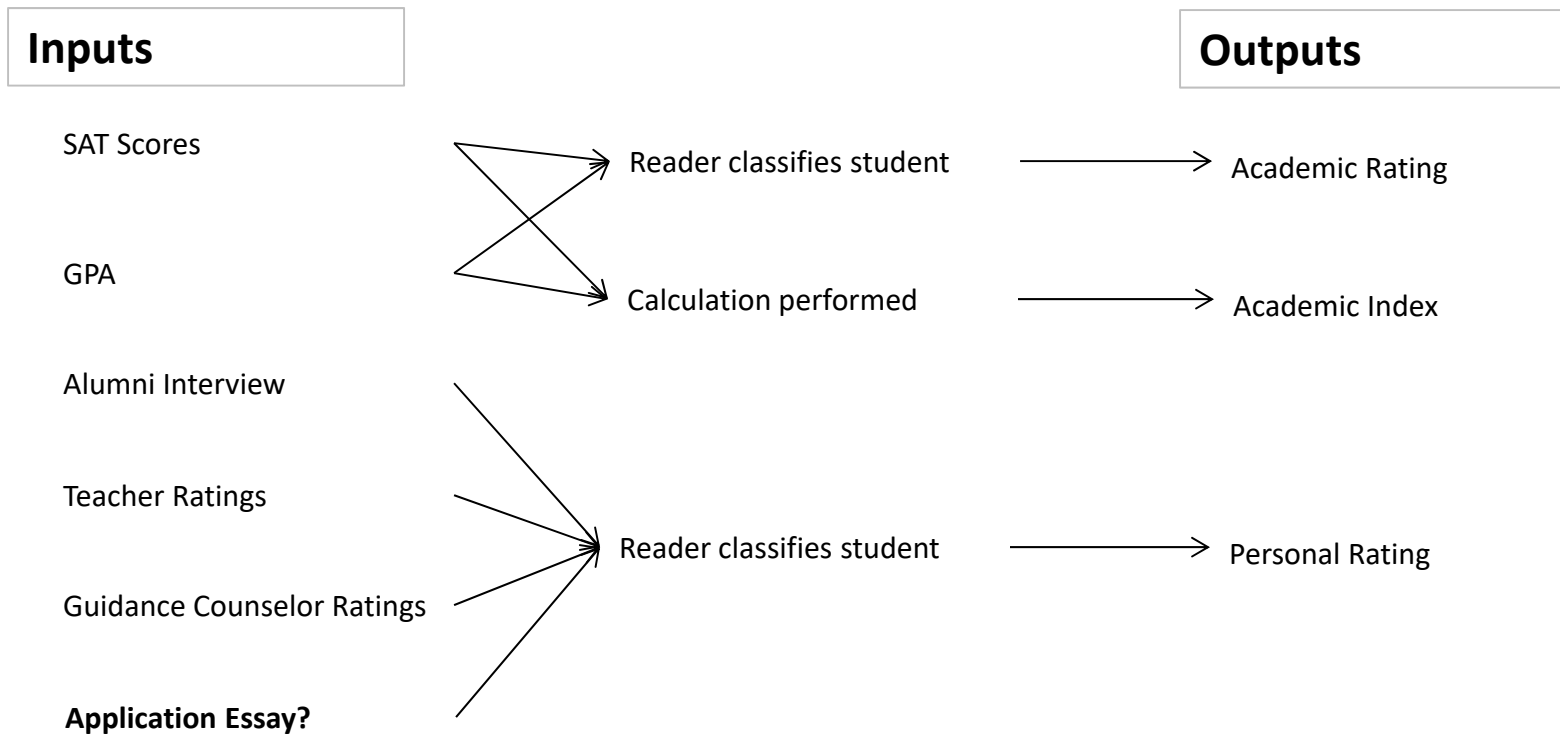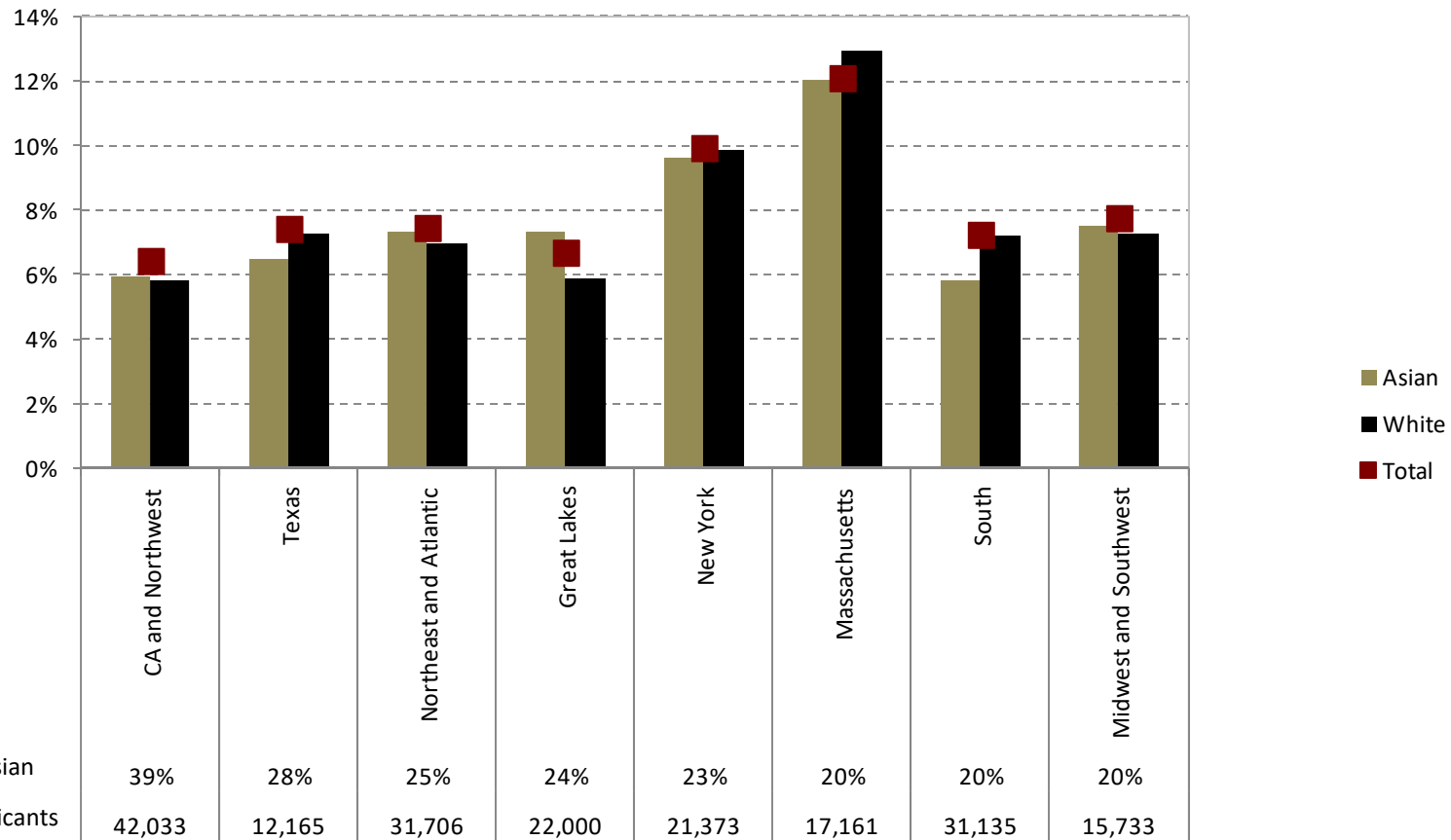
Academic Index	SAT Scores + GPA	Accounts for 98% of the variation in Academic Index. Academic Index is a weighted average.
Academic Rating	SAT Scores + GPA	Accounts for 70% of the variation in Academic Rating. Can't explain some of the variation because Academic Rating data doesn't include the granuality provided by + and -. Also potentially some noise due to readers
Personal Rating	School Support + Alumni Interviews	Accounts for 20% of the variation in Personal Rating. Inputs of Teacher Evaluations, Guidance Counselor Evaluations, and Alumni Interviews don't fully explain how Personal Ratings are assigned. Don't have any numeric rating of personal statement.

***Admit Rates by Region for White and Asian Non-Athlete, Non-Legacy Applicants,
Classes of 2007-2016***

	CA and Northwest	Texas	Northeast and Atlantic	Great Lakes	New York	Massachusetts	South	Midwest and Southwest
Percent Asian	39%	28%	25%	24%	23%	20%	20%	20%
Total Applicants	42,033	12,165	31,706	22,000	21,373	17,161	31,135	15,733

Legend:
■ Asian
■ White
■ Total

Notes:
• Excludes legacies and athletes.

- Information lost by not recording plusses and minuses.

- Yield considered when admitting students?

- Other factors not used in models:
  - Children faculty/staff
  - Search for socioeconomic diversity
  - High school quality/opportunities open to student
  - Dockets