Team 5 Presentation

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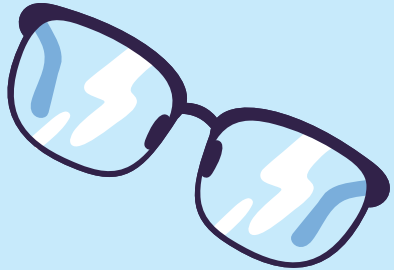
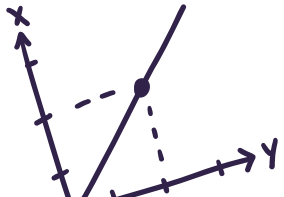


How does average household income affect US students' development in each school subject between the years of 2005 and 2015?

Dataset

Department of Education's primary database on public elementary and secondary education in the US

over 575 students' average GPA per subject, SAT and subject test scores, state of residency, and family income, per year



Austin Cory Bart
October 24, 2016

Hypothesis

The hypothesis is that students with a household income below the median of 60k will have lower math and verbal scores on average than their counterparts with family incomes higher than 60k.

Literature Review

The New York Times

Education Gap Grows Between Rich and Poor, Studies Say

Share full article 543

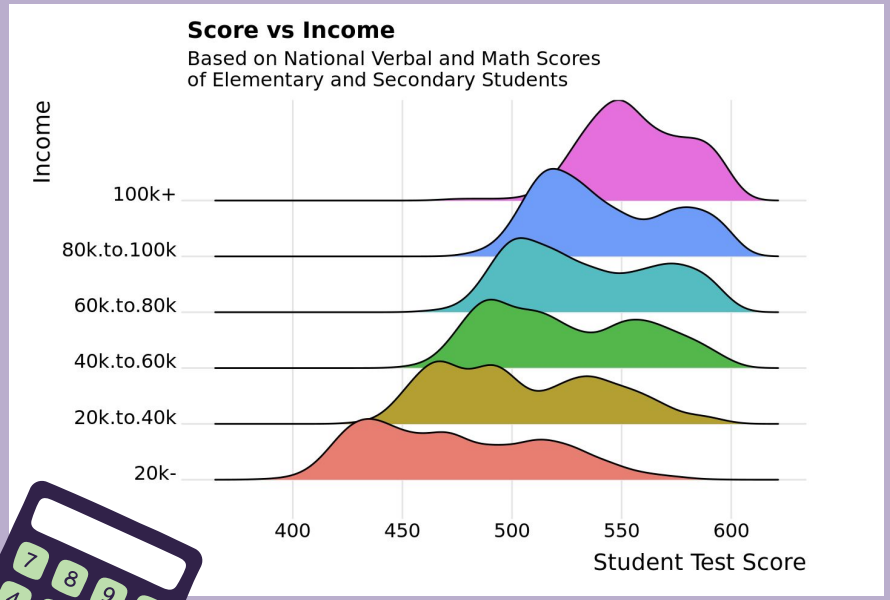
By Sabrina Tavernise

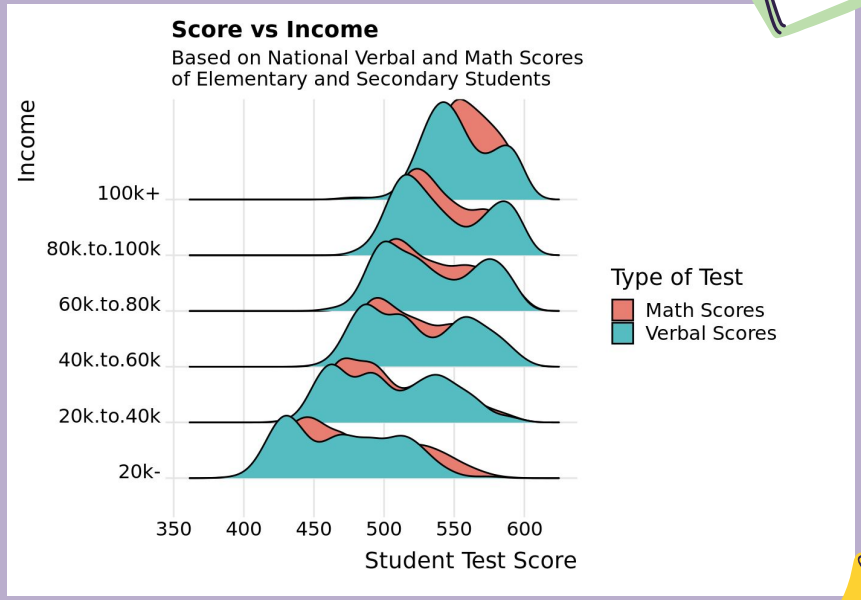
Feb. 9, 2012

- Despite education being viewed as an equalizer in society, many studies in recent years have highlighted a widening education gap depending on affluence and household income
- While the educational gap based on race has shrunk since the 60s, imbalance in college completion and test scores has grown by 40% since the 60s

Methodology

Methodology (cont.)

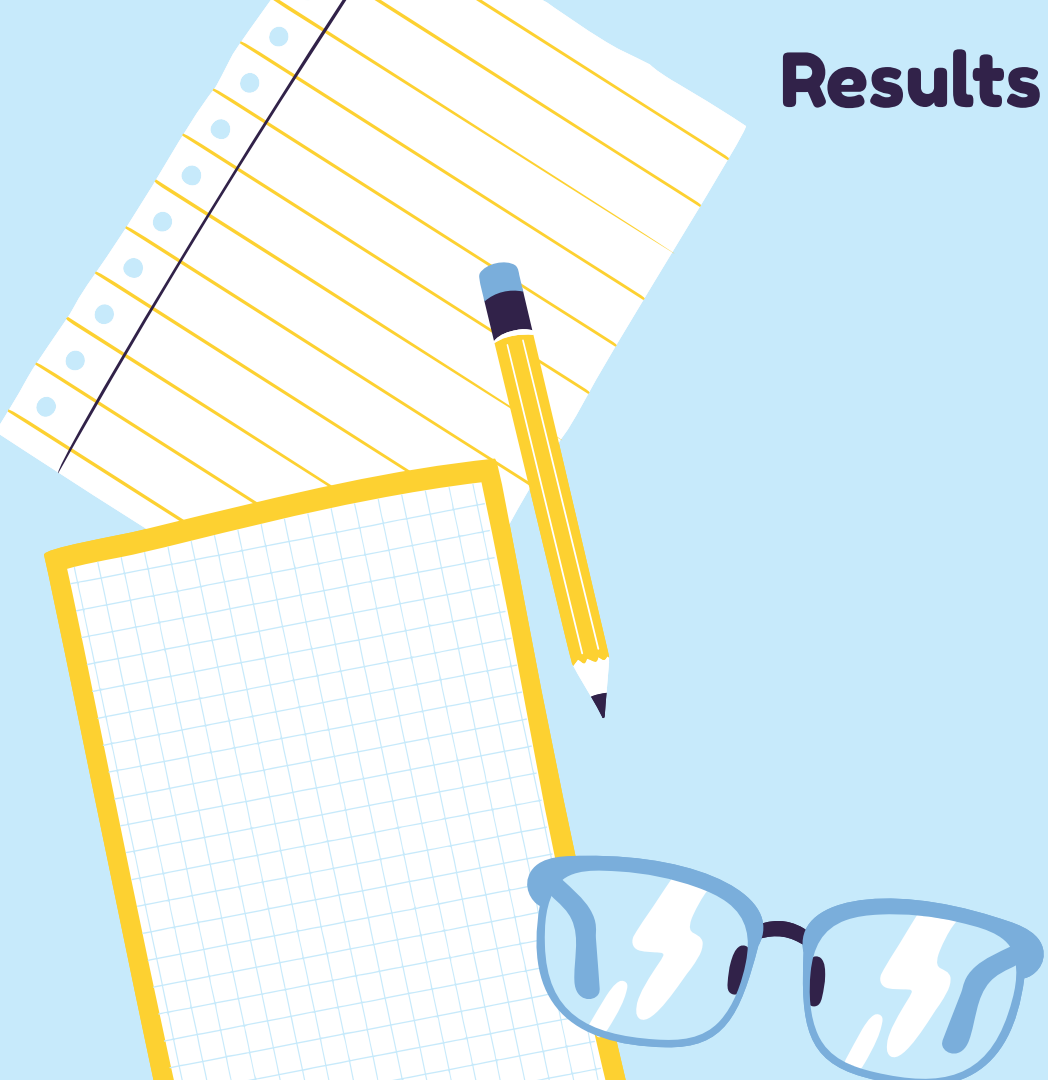




Methodology (cont.)

$$\widehat{score} = 497.91 + 41.4 * Income.20k.to.40k + 63.22 * Income.40k.to.60k + 73.72 * Income.60k.to.80k + 84.77 * Income.80k.to.100k + 102.21 * Income.+100k - 57.33 * Northeast - 42.3 * South - 37.86 * West$$

Results



We chose to compute the AIC of our model to determine the fit of our model: 67262.4.

To conclude: higher average household income correlates positively with higher test scores - region has an impact on this correlation. North Central has the highest scores in our visualization along with the highest scores, on average, in the linear regression model.