



Government funded for SAT and ACT

Project 1

Thanyatorn Parapuntakul (Mint)

Agenda

01. Background

02. Objective

03. Analysis findings

04. Conclusions

05. Recommendations

Background

In United State, SAT and ACT are standardized tests in order to admittance to a US university along with others extracurricular activities, essays, athletics, and others.

The difference between SAT and ACT:

SAT has **two sections** of the test: Evidence-Based Reading and Writing and Math.

ACT has **4 sections**: English, Mathematics, Reading, and Science, with an additional optional writing section.

achieve
more®

SAT®

ACT®



Objective

As United State government, department of education's decided to fund ACT and SAT test for high school students in particular states with a limit budget in order to help student for higher education.

For the best outcome, which states should they fund for ACT and SAT?

State with free SAT/ACT and its trends

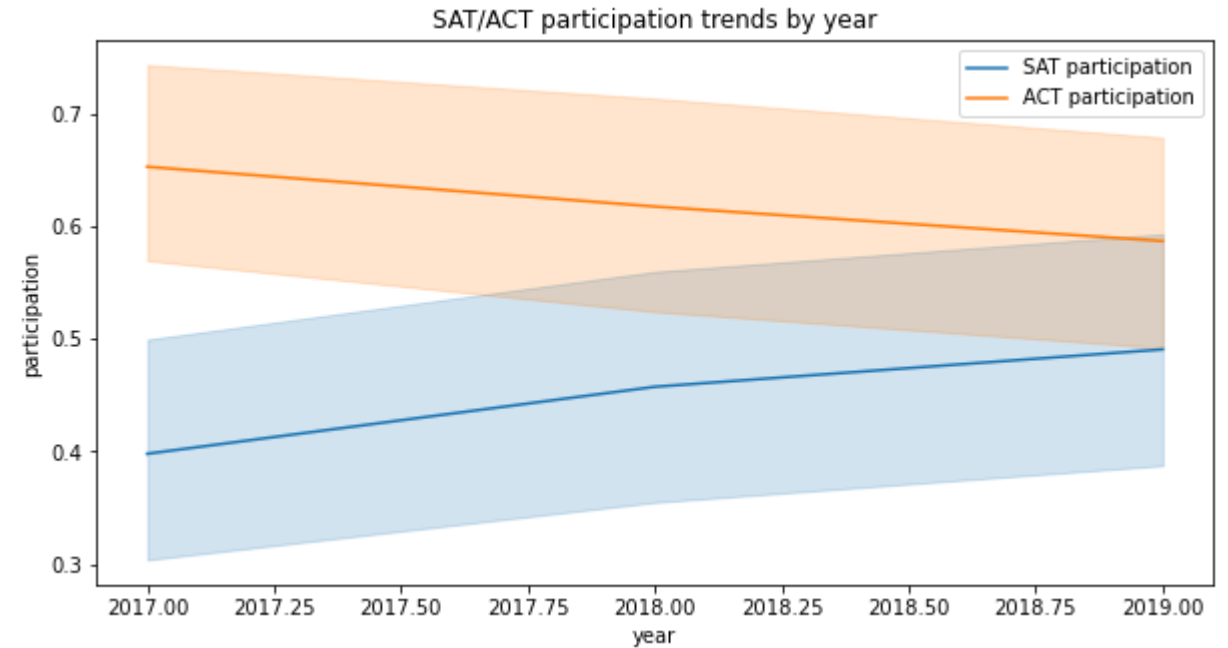
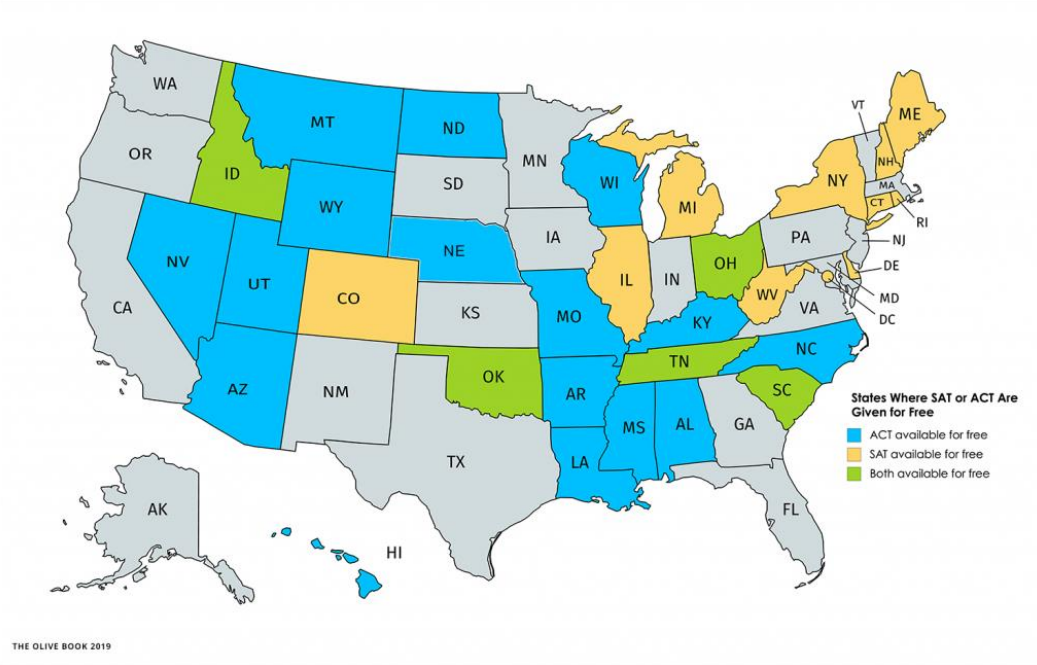
In 2017

- 17 states funded for ACT
- 9 states funded for SAT

In 2019

- 20 states funded for ACT
- 15 states funded for SAT

The Average participation of student who take SAT is 40% in 2017 and increased to 50% in 2019
ACT is 65% in 2017 and decreased to 59% in 2019



Analysis Findings

“

States which provide free SAT/ ACT test had an average **participation rates** at

>90%



But..

Analysis Findings

Relation between participation and average score

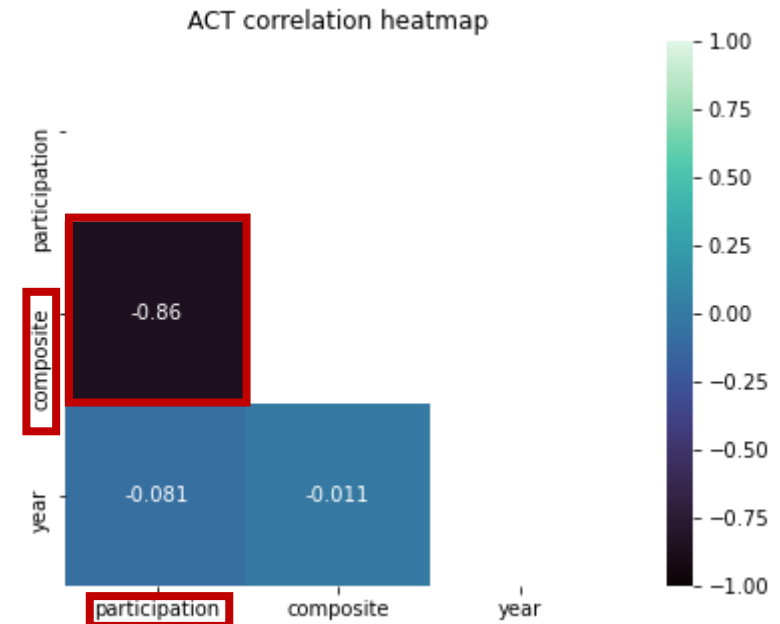
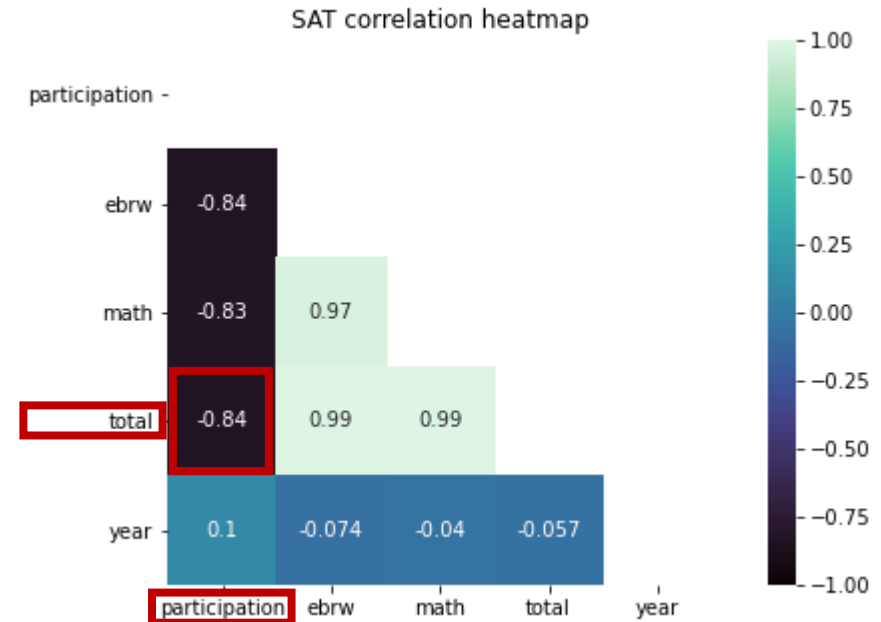
Correlation between participation and total/composite score is inverse relationship.

As participation rate **get higher**

the average total of SAT and average composite of ACT are **get lower**.

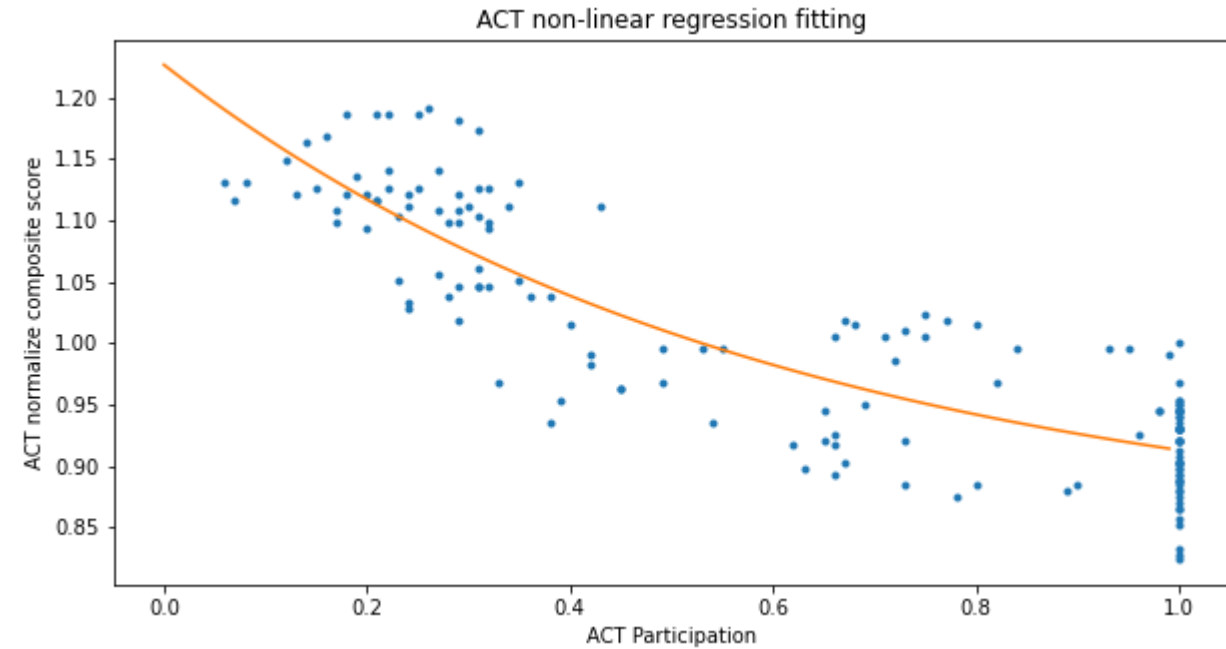
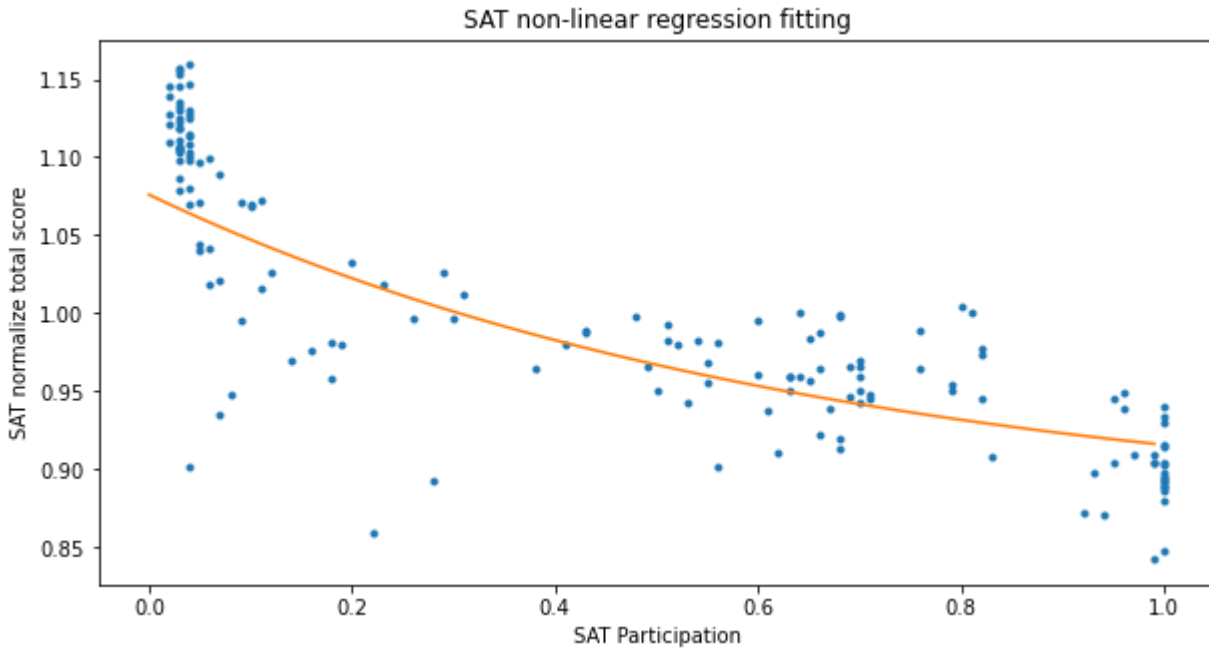
The state

Therefore, in order to funded government need to make sure that the particular state can have high average total/composite score when participation rate is nearly 100%.



Analysis Findings

Relation between participation and average score

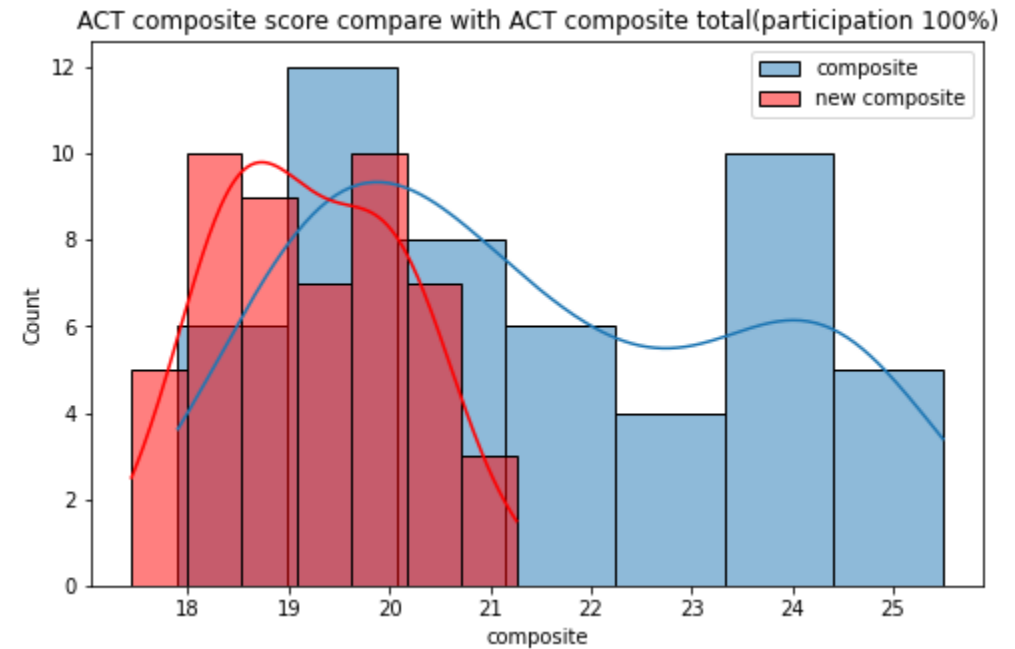
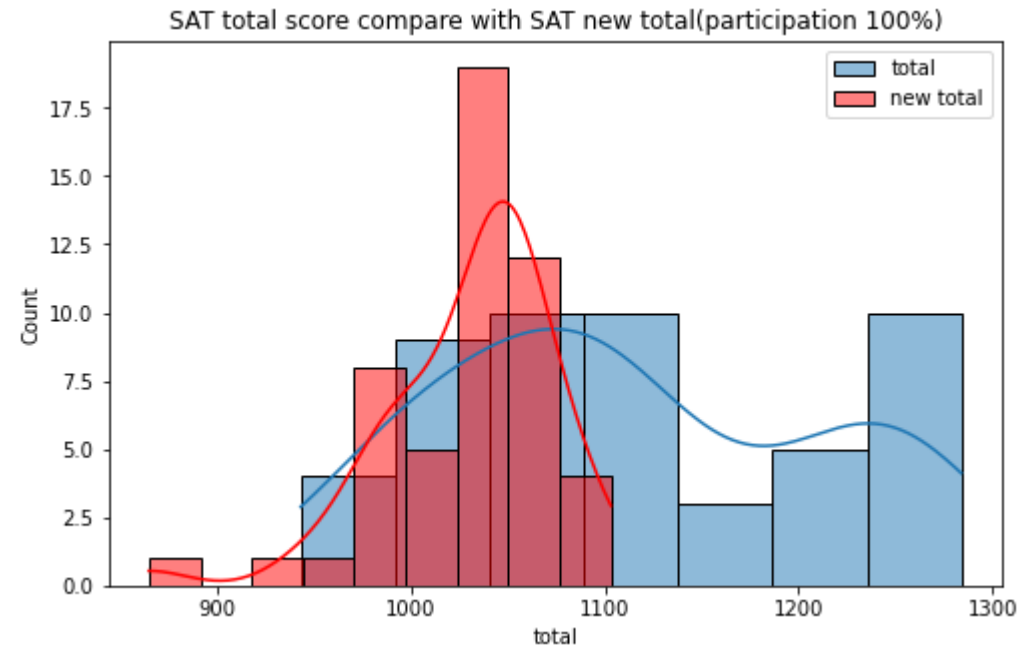


Non-linear regression fitting by least squares method

For score prediction of particular state when participation is 100%

Analysis Findings

New total/composite score with participation is 100%



Conclusions

Based on the data, major movements in participation rates are depended to the state policies.

If a state were funded for all students to take SAT/ACT, the participation rate would increased to nearly 100%.

And participation rates also related with average total/composite score in negative way.

Therefore, prediction of new total/composite score when participation rate is 100%, is the way to ranked a states with high ability of student regardless to the differs of participation rate.

Recommendations



As the result, the government should make funded to which states that have prediction of high average total/composite score while the participation rate is nearly to 100% which are:

- SAT funded for Massachusetts, Minnesota, Wisconsin, Virginia and South Dakota etc.
- ACT funded for Connecticut, Massachusetts, New Hampshire, Michigan and Illinois etc.



Thank you

