



2017 - 2019

ACT Testing and Childhood Poverty Among U.S. States

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Problem Statement

Project Objective

- Explore if state childhood poverty rates have any correlation between the reported ACT scores from 2017 to 2019.
- Provide recommendations on how to increase overall ACT composite scores.



Background

Childhood Poverty in U.S. States

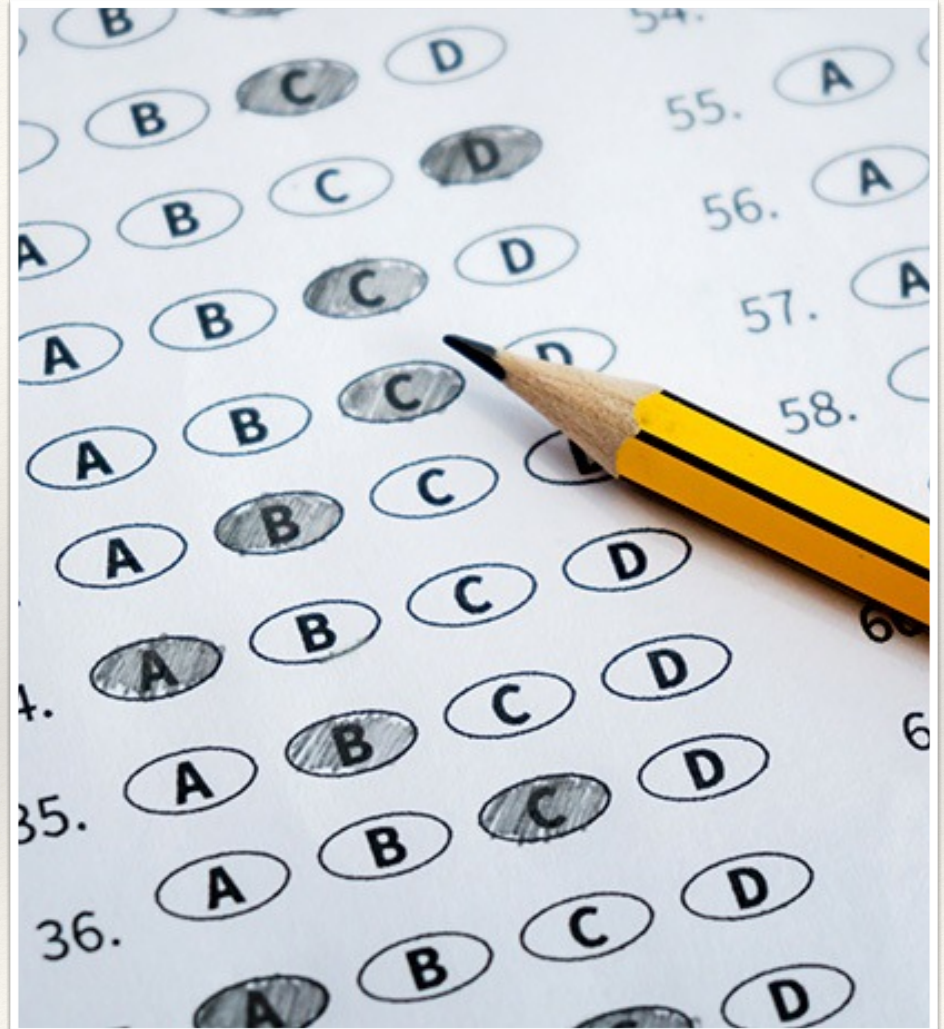
- “The poverty rate in U.S. is close to 12%, meaning 1 in 8 Americans live at or below the poverty level.
- 1 in 6 children in the U.S. are living in poverty.
- 11 million children, or about 1 in 9 of all children in the U.S., live at 50 percent below the federal poverty line.
- 37% of children raised in poverty do not finish high school." ([source](#))



Background

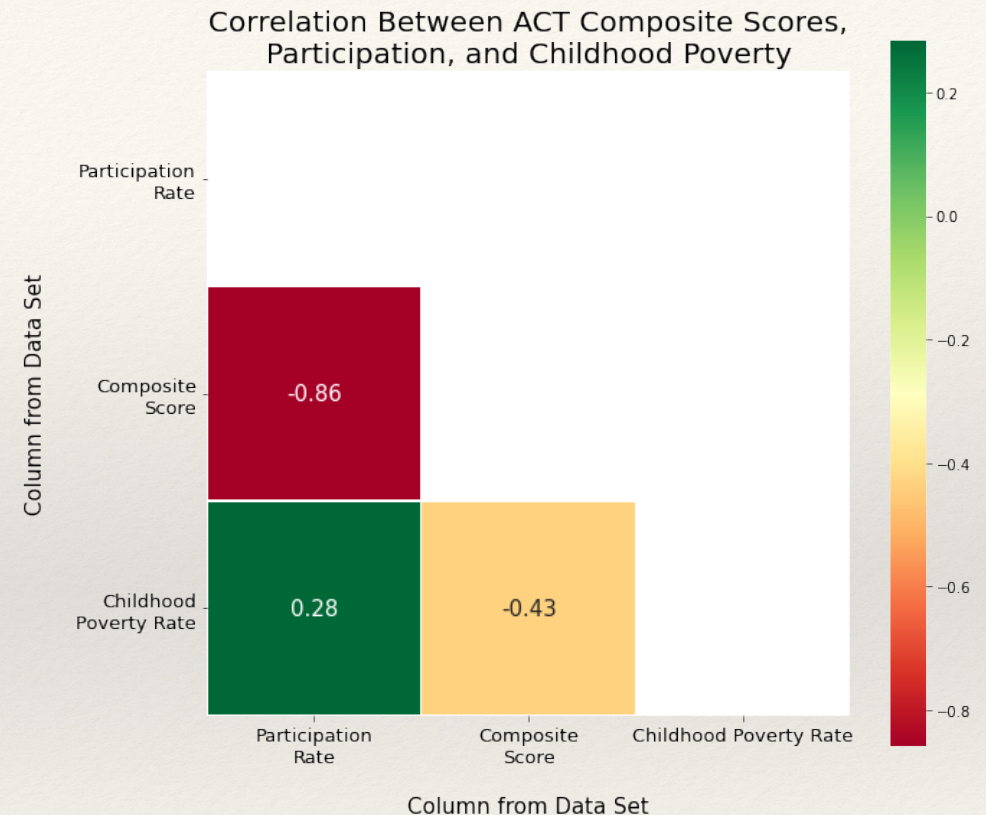
The ACT Standardized Test

- Higher education institutions use the ACT as an indication of overall academic success, and to address other factors needed during admissions and enrollments. ([source](#))
- The ACT has 4 sections: English, Mathematics, Reading, and Science, with an additional optional writing section.
 - Each section is scored from 1 to 36
 - The composite score is the average of these four scores ([source](#))
- Some states mandate participation in the ACT ([source](#))



Data Correlations

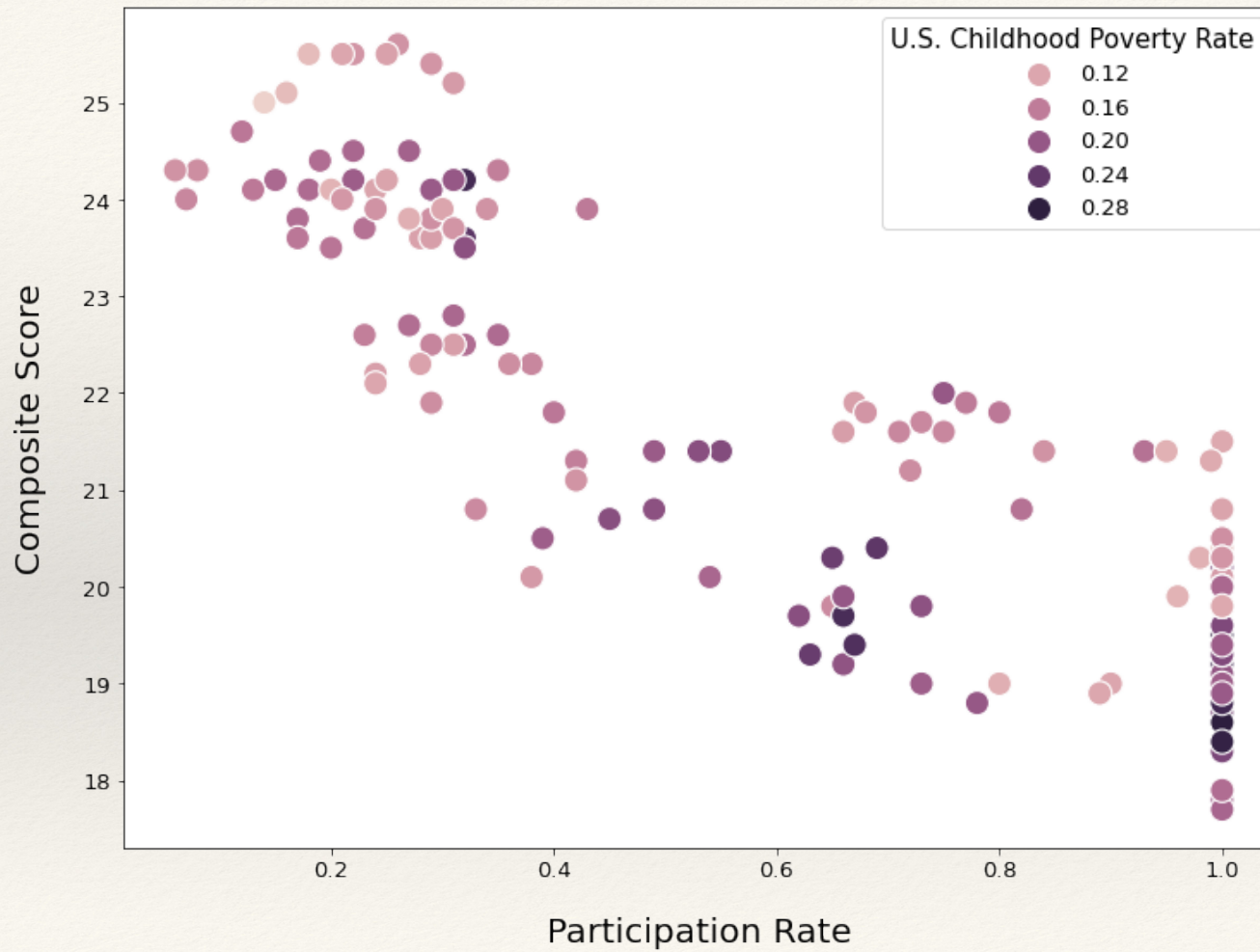
- There is a statistically significant negative correlation between a state's composite score and their participation rate.
- There is also a positive correlation between childhood poverty rates & participation rates, and a negative correlation between childhood poverty rates & composite scores, but they are not considered statistically significant.



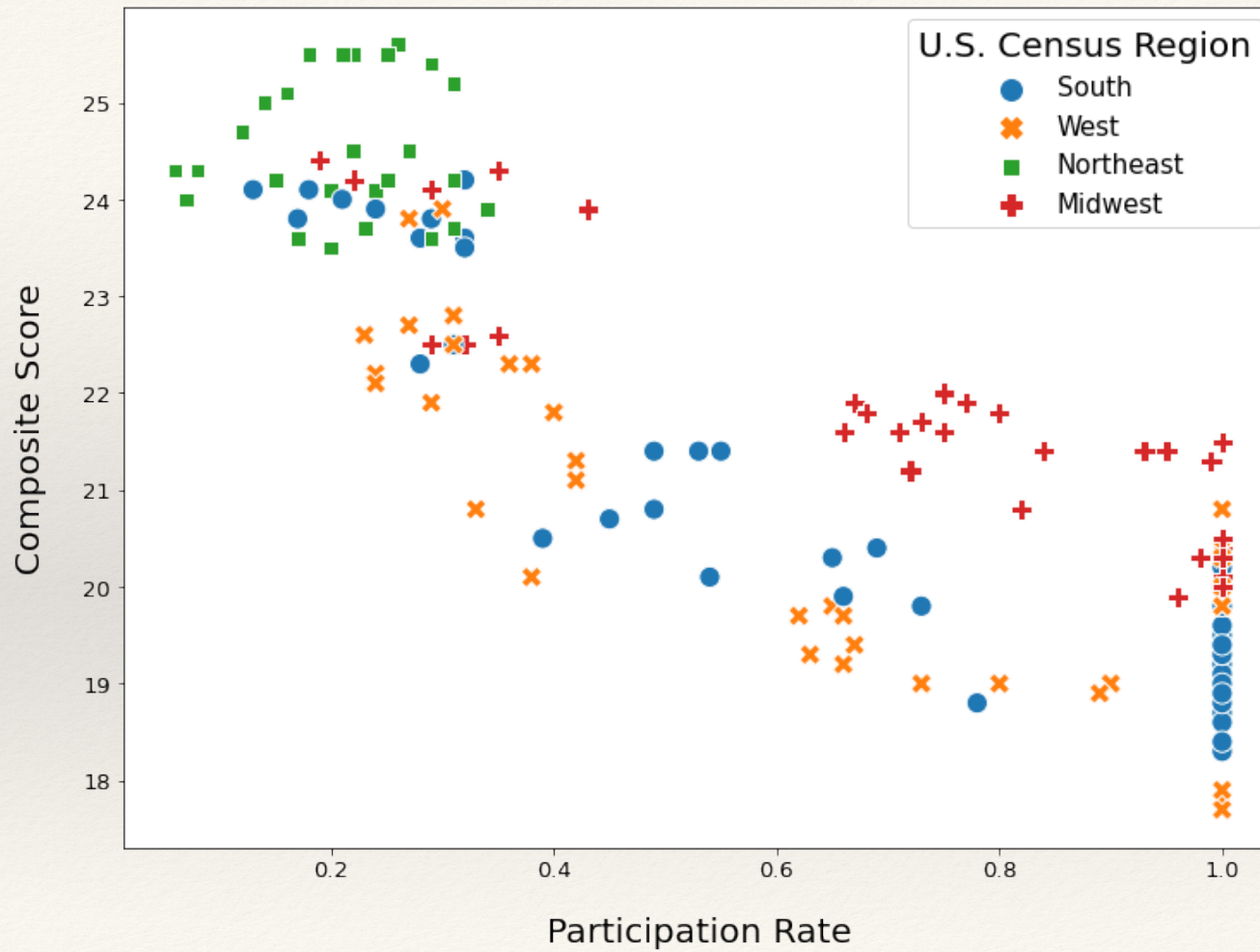
Visualizing These Correlations



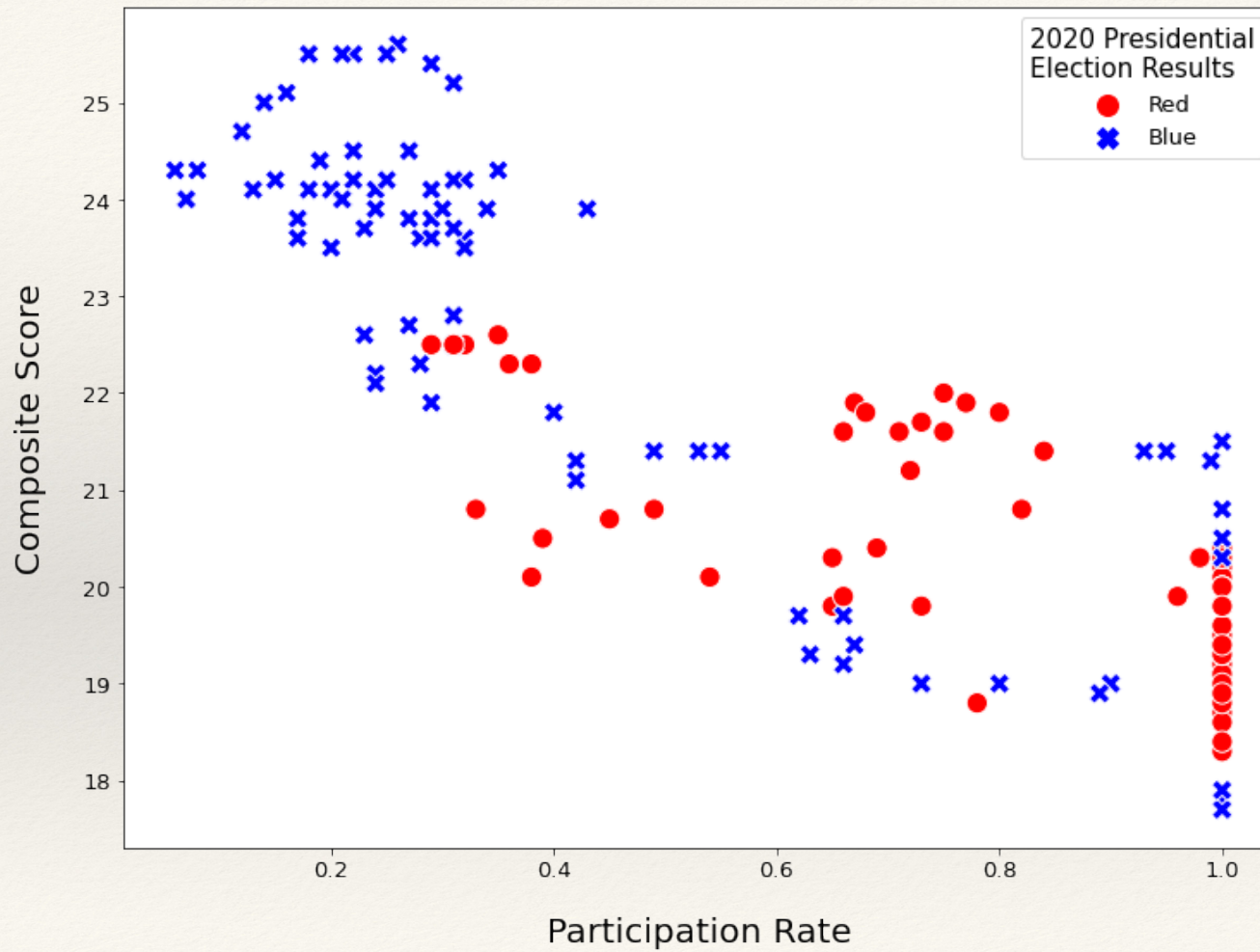
State's Participation Rates and Composite Scores
By Youth Poverty Rate (2017-2019)



State's Participation Rates and Composite Scores
By U.S. Census Regions (2017-2019)



State's ACT Participation Rates and Composite Scores
By 2020 Presidential Election Results (2017-2019)



Summary

Conclusions & Recommendations

- Move away from mandatory testing and divert resources to programs that combat childhood poverty.
- Model ACT best practices after the states in the Northeast if participation rates are not the top priority.
- If participation rates want to be prioritized, do it without sacrificing composite scores.
 - Model after states with participation rates above 60% and composite scores above 21.



Image Sources

- ❖ Title image: <https://www.npr.org/sections/ed/2016/01/07/461595631/how-to-help-kids-in-poverty-adjust-to-the-stability-of-school-after-break>
- ❖ Chain image: https://en.wikipedia.org/wiki/Chain#/media/File:Broad_chain_closeup.jpg
- ❖ Mountain image: <https://outdoorinquirer.com/hardest-mountains-to-climb/>
- ❖ Multiple Choice image: <https://elearningindustry.com/multiple-choice-questions-writing-what-to-do>
- ❖ Binoculars image: <https://www.stocksy.com/537685/sunset-silhouette-of-backpacker-searching-with-binoculars>
- ❖ Rocks Balancing image: <https://firstclassrehab.com/why-is-good-balance-the-key-to-avoiding-falls/>