Achievement Gap Vulnerability In Massachusetts
The Intersection of School Quality, Income, and Housing Costs Risks in Massachusetts Public School Districts

OVERVIEW

There is growing gap between the rich and the poor, and this gap has serious public health implications. Lower-income individuals are at a significantly higher risk for poorer economic, achievement, and health outcomes. Additionally, inadequate education and living conditions have serious implications for health disparities.

The purpose of this map is to provide a visual examination of school quality and socioeconomic disparities in Massachusetts public school districts to assess which areas face the greatest amount of risk. The analysis scored socioeconomic and school quality risk factors to determine which school districts were exposed to the greatest amount of risk.


METHODS

SCHOOL QUALITY SCORE

English and Math Massachusetts Comprehensive Assessment System (MCAS) scores from 2011 were collected and used to construct a school quality score. The Composite Performance Index (CPI) for each subject and a figure calculated and released by the state, was used as the basis for scoring. The CPI is a 100-point index created by assigning 100, 75, 25, 50, or 0 points for each school district, with five representing the lowest school quality score.

SOCIOECONOMIC RISK SCORE

Data on income and housing costs were collected from the United States Census Bureau’s 2010 5-Year American Community Survey using school districts as a geographic basis and used to construct a socioeconomic risk score. Median annual household income and median monthly housing costs were selected and used as indicators of socioeconomic risk. Each set of data for income and housing costs was divided into quintiles. From there, the quintiles were used to assign a score of one through five to each risk factor for each school district, with five representing the quintile with the lowest housing costs or the lowest household income. The scores for each risk factor were summed by school district to create the socioeconomic component of the vulnerability score.

VULNERABILITY SCORE

To create the total vulnerability score, the school quality score and the socioeconomic score, the data were aggregated. The respective school quality and socioeconomic scores for each school district were summed. The final map displays the total vulnerability score.

CONCLUSION

With a variety of factors playing a role in the achievement gap, this analysis was limited to examining only four of these factors. MCAS scores, household income, and median housing costs may not provide a complete picture of what is contributing to the growing gap in education and income in Massachusetts. A relationship may exist between these four factors and growing inequality, but they do not represent the sole components that should be assessed as contributing to these disparities.