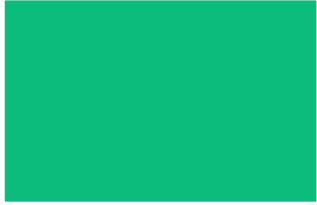


[REDACTED]

[REDACTED]







A “Best”



B “Still Desirable”



C “Definitely Declining”

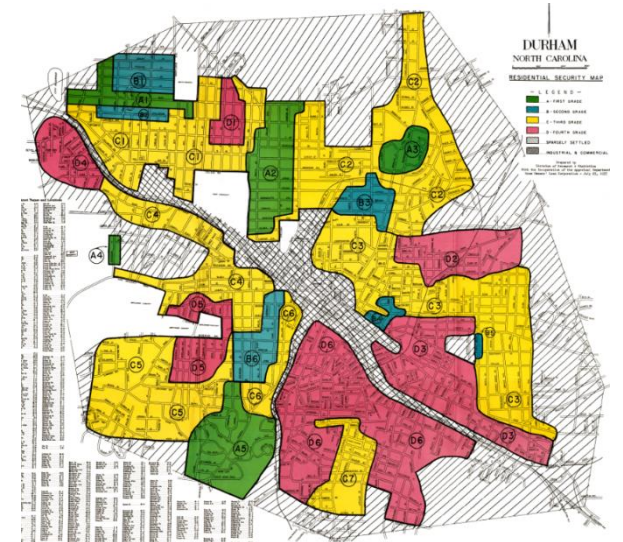


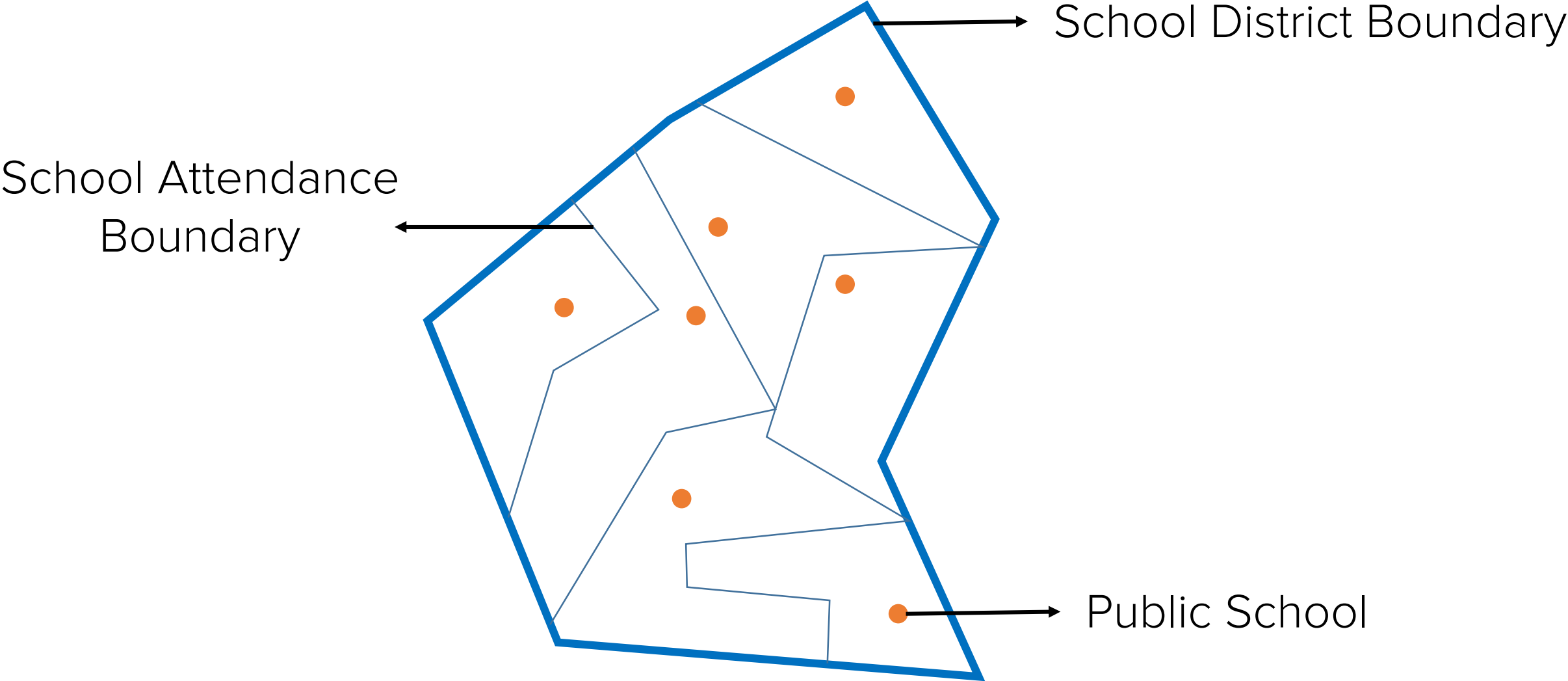
D “Hazardous”

“This area is yellow, largely because the school for white children is in the negro area, D-8, and because the negroes of D-8 pass back and forth...”

“Respectable people but homes are too near negro area”

“Bad for whites; fair for darkies”





How do the historic redlining maps relate to racial diversity, the number of economically disadvantaged students, and student expenditure?

Hypothesis:

There is a link between redlining maps and racial diversity, the number of economically disadvantaged students, and student expenditure in elementary public schools.

Prediction:

Schools in Majority D grade school attendance boundaries (SABs) have larger shares of students of color, more economically disadvantaged students, and lower student expenditure.

Study Area



Site Selection

Chicago

Los Angeles

New York

- Large cities
- SABs available

Exploring each city individually

Data

Redlining Maps – Shapefiles

[Mapping Inequality, University of Richmond](#)

CRS = WGS 84

| City | Number of Polygons | Extent |
|-------------|--------------------|--|
| Chicago | 580 | xmin: -87.88499, ymin: 41.60414, xmax: -87.52515, ymax: 42.28303 |
| Los Angeles | 416 | xmin: -118.6104 ymin: 33.70563 xmax: -117.7028 ymax: 34.30388 |
| New York | 397 | xmin: -74.25518 ymin: 40.49942 xmax: -73.69995 ymax: 40.91325 |

Data

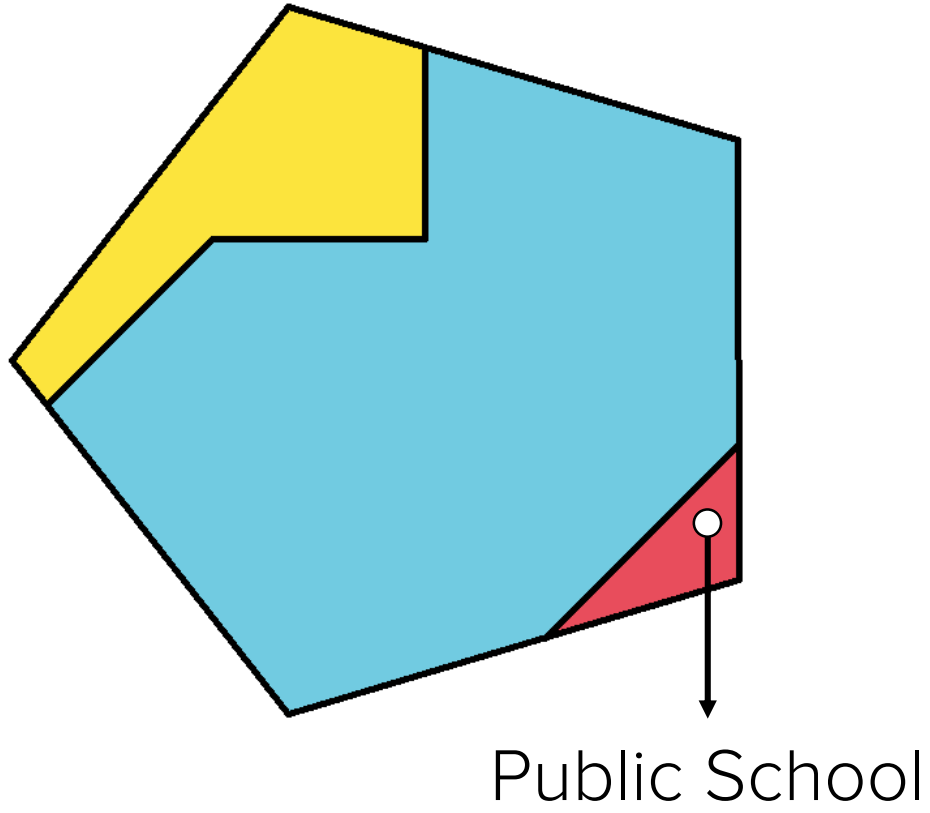
School Attendance Boundaries – Shapefiles

Open data portals (hyperlinked below)

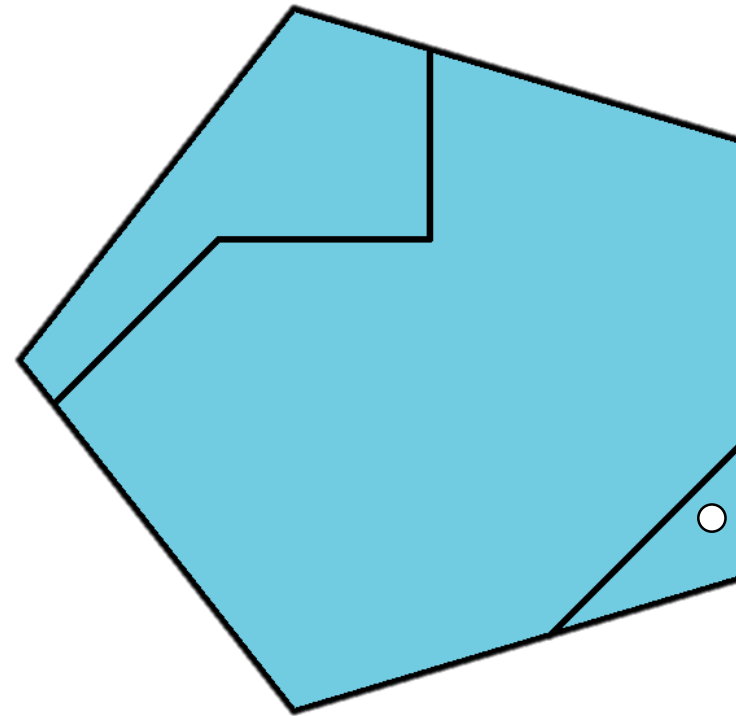
CRS = WGS 84

| City | Number of Polygons | Extent |
|-----------------------------|--------------------|--|
| Chicago | 403 | xmin: -87.94011 ymin: 41.64454 xmax: -87.52414 ymax: 42.02304 |
| Los Angeles | 563 | xmin: -118.668 ymin: 33.7046 xmax: -118.1428 ymax: 34.35463 |
| New York | 786 | xmin: -74.25577 ymin: 40.49599 xmax: -73.70002 ymax: 40.91544 |

School Attendance
Boundary

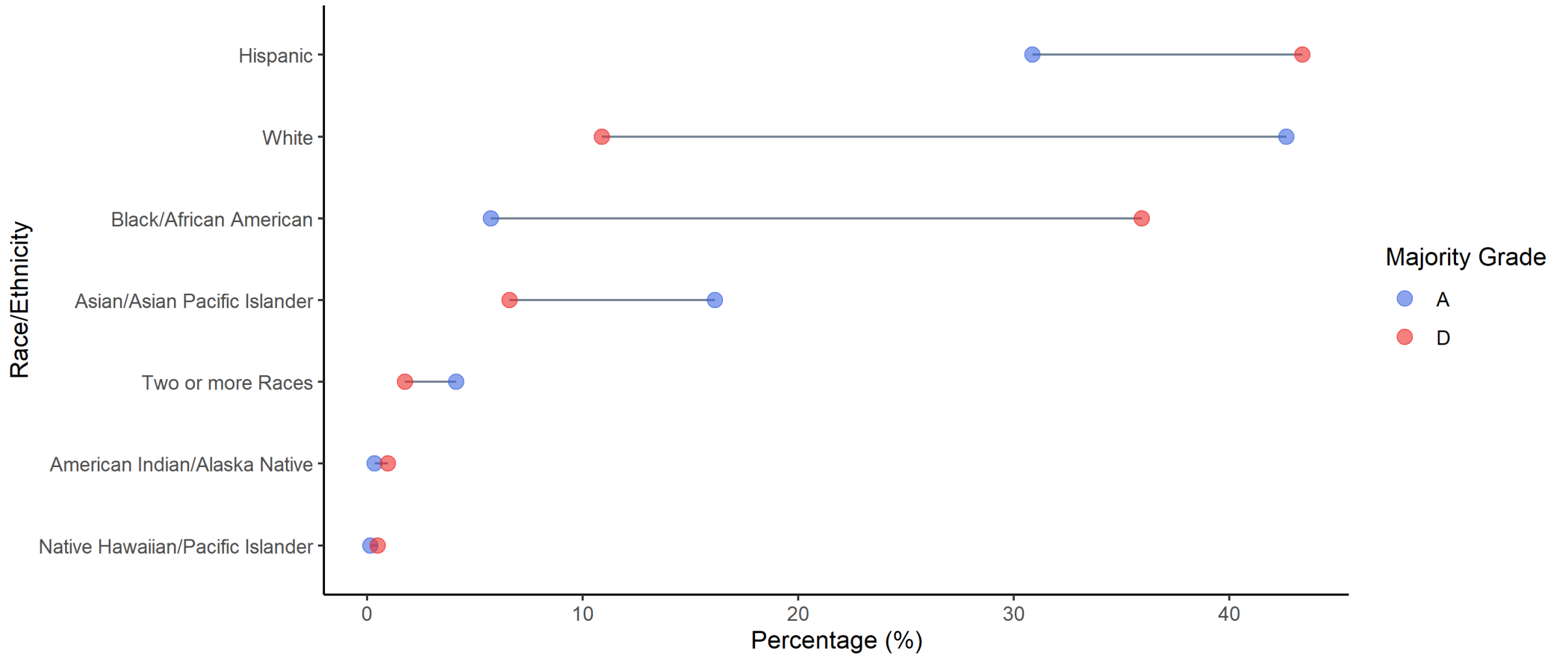


School Attendance Boundary
by Majority Grade

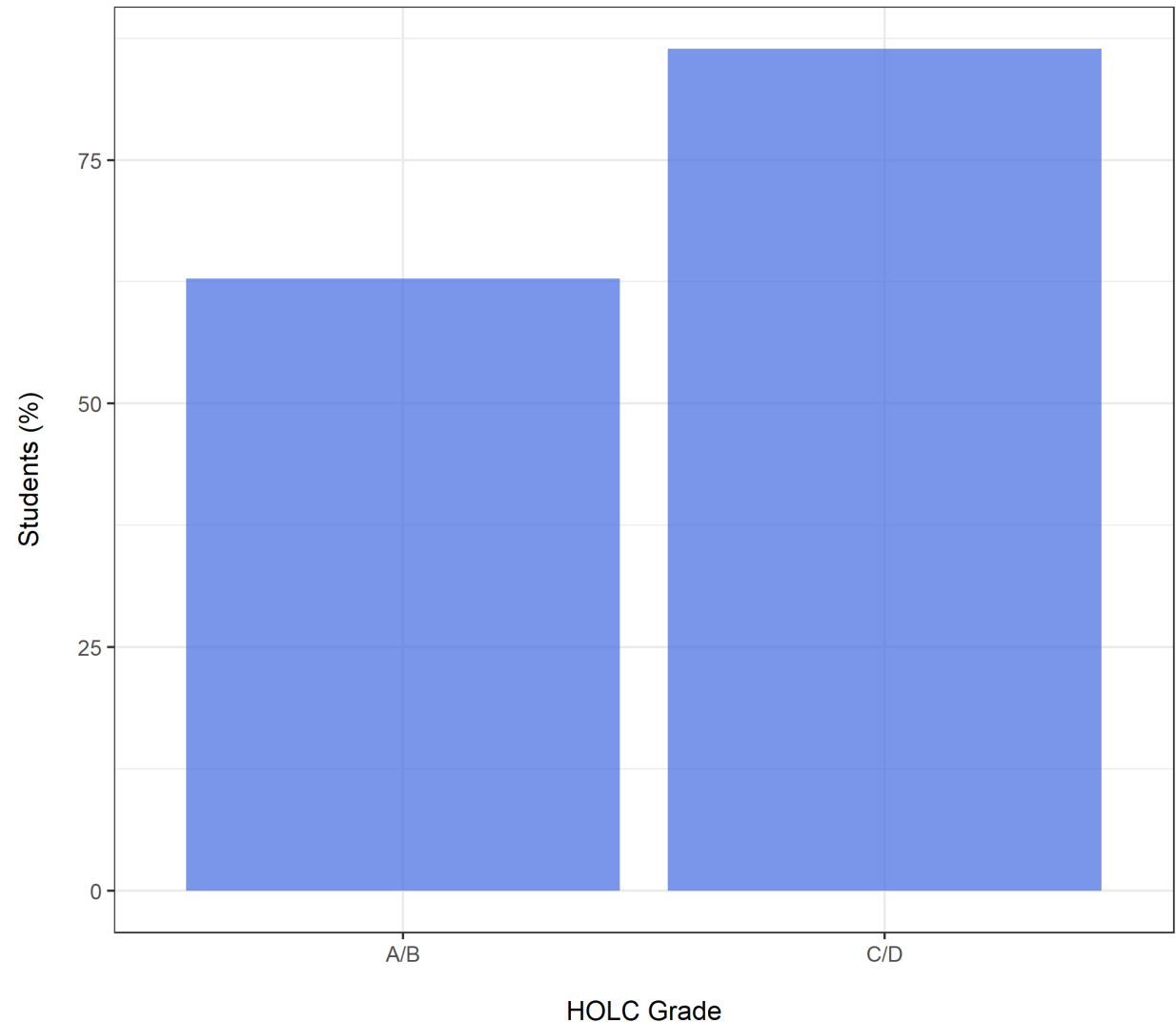


Average Racial Composition in Schools - NY

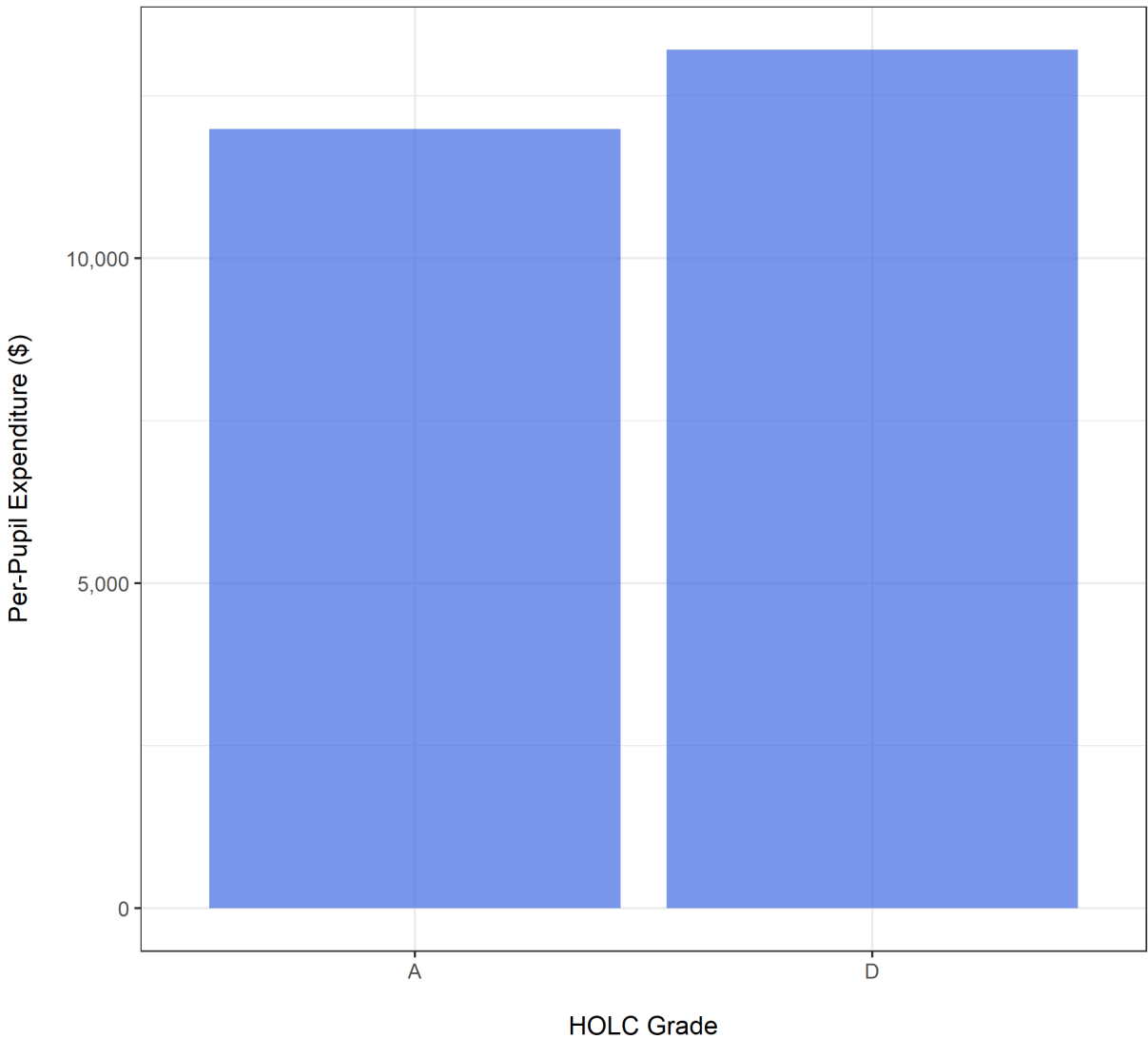
Schools in School Attendance Boundaries of Majority A and D HOLC grades



Average Free and Reduced Lunch Students in Schools - LA
Schools in School Attendance Boundaries of majority A or B HOLC
grades vs majority C or D HOLC grades



Average Per Pupil Expenditure in Schools - Chicago
Schools in School Attendance Boundaries of Majority A and D HOLC grades



Overview

Across all 3 cities:

Schools in majority D SABs have:

- Larger shares of Black and Hispanic student bodies
- More economically disadvantaged students
- Higher per-pupil expenditure

(compared to schools in majority A SABs)

Support for Predictions

Across all 3 cities:

Schools in majority D SABs have:

- Larger shares of Black and Hispanic student bodies
- More economically disadvantaged students
- Higher per-pupil expenditure

(compared to schools in majority A SABs)

Caveats

- Each city explored individually
- Representative?
- Accuracy of School Attendance Boundaries
- Proxy for poverty
- Defining 'majority'
- School levels

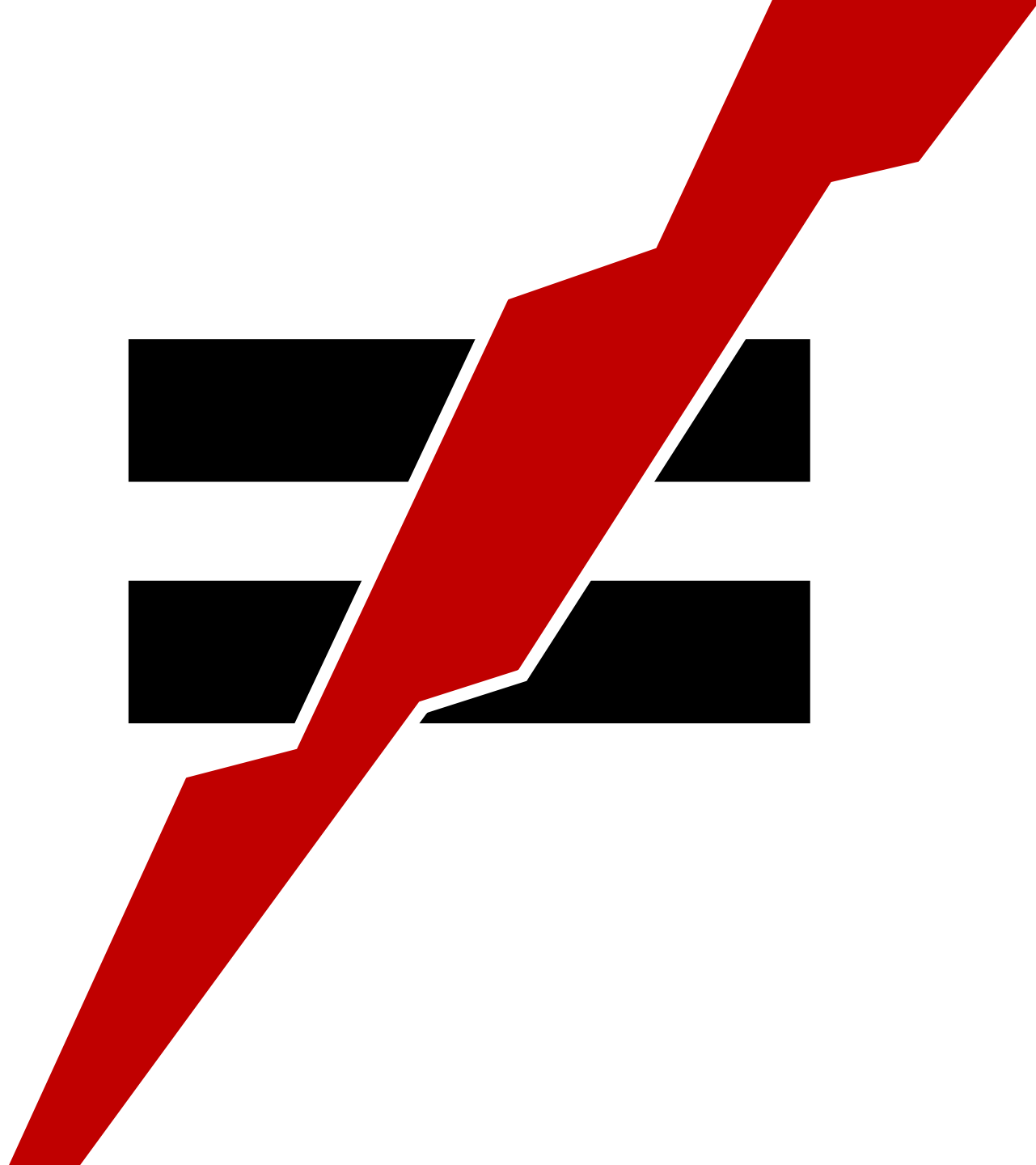
Limitations

How do the historic redlining maps relate to racial diversity, students receiving free and reduced lunch, the number of economically disadvantaged students, and student expenditure?

- SAB-level analysis
- Few cities

Additional Analysis

- Identify other metrics for comparison
- Find better proxy for poverty
- Compute spatial autocorrelation
- Analyze more cities?



Feedback/Questions?