



Quantifying the Full Costs of School Transportation

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Overview

- School Transportation Costs
- Cost Saving Examples
- Simulation Analysis
- Policy Implications

School Transportation Costs



School Districts

- 4.2% of all education spending in the United States is for transportation
- \$22.3 Billion or \$452 per student



Families

- 50% of students use autos to get to school
- 30 billion miles driven
- 6.6 billion auto trips
- 1 billion hours in the car

Hazard Busing



Busing children to school due to hazardous walking conditions

- Florida: 1% of all students are bused due to hazardous conditions
- US: 5.6% of K-8 students lived within 1 mile of school and rode the school bus

Best Cost Estimate:

Hazard Busing costs school districts \$200-400 million per year

What could you do with \$200-400 million?

Build 3,000 miles of bike lanes



Bike Lane:
\$90,000 per mile

Hire 46,000 crossing guards



Crossing Guard:
\$6,500 per
intersection per year

Install 600,000 school crossings



School
Crossing:
\$520

Have schools used SRTS to save transportation costs?

Yes.

Example: Auburn, Washington

- Reduced need for hazard busing through infrastructure investments
 - Traffic calming near schools
 - Sidewalks/paths
 - Signage
- Now: 20% of students walk or bike
- School district saved \$240,000 annually in hazard busing costs
 - One elementary school went from 6 buses to 1

Example: Highland Park, NJ

- Small district: 1.9 square miles
- Eliminated school bus service in fall 2008 and saved \$100,000 per year
- Implemented measures to make walking and biking safer
 - New crossing guards
 - Designated walk-to-school routes
 - Walking school buses
 - New sidewalks/crosswalks

Where can this work best?

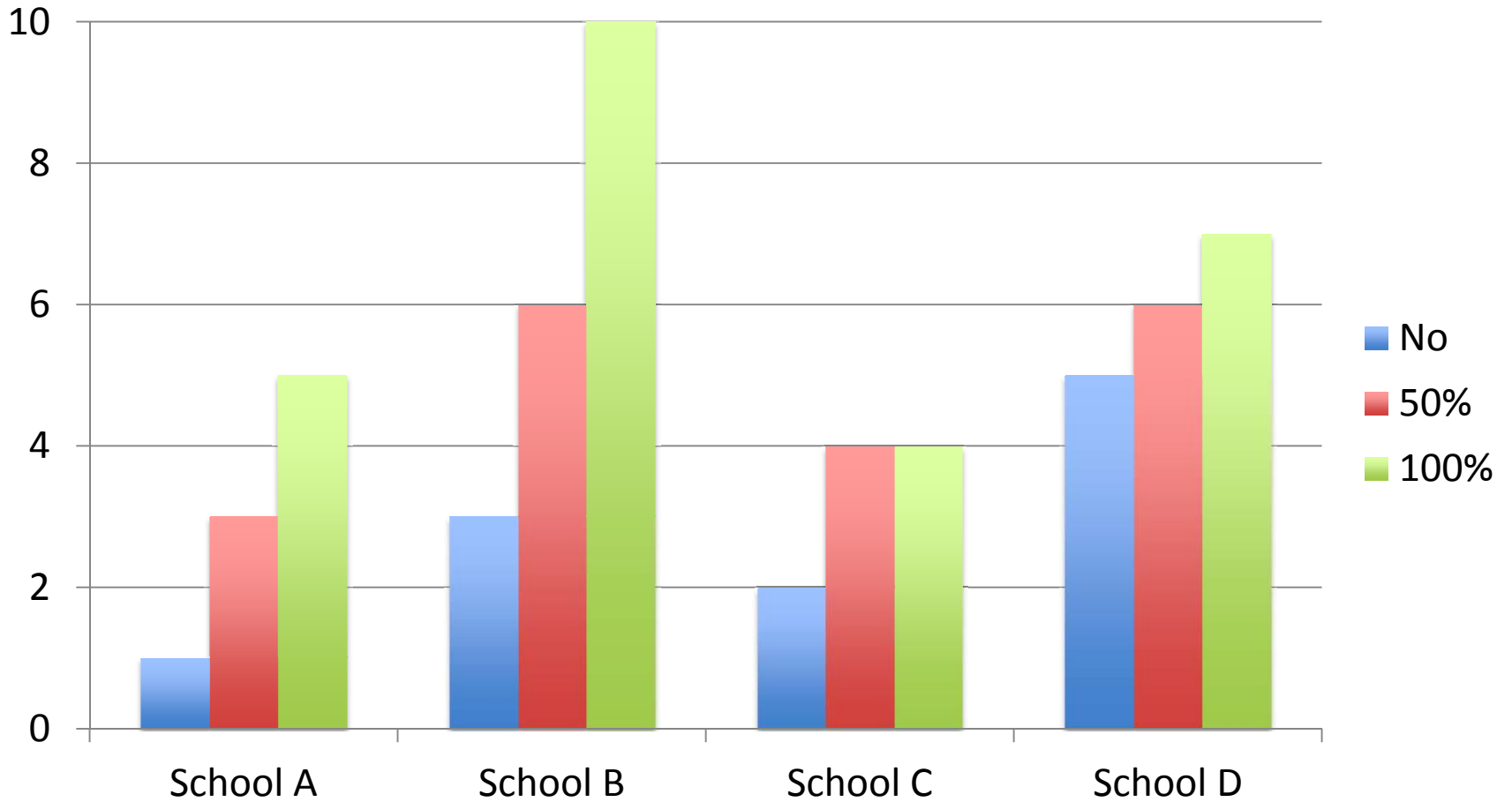
Simulation Analysis

- Compare busing costs with and without hazard busing
 - No hazard busing
 - 50% of kids within 1 mile hazard bused
 - 100% of kids within 1 mile hazard bused
- 4 schools that vary in land use context and proportion living within one mile

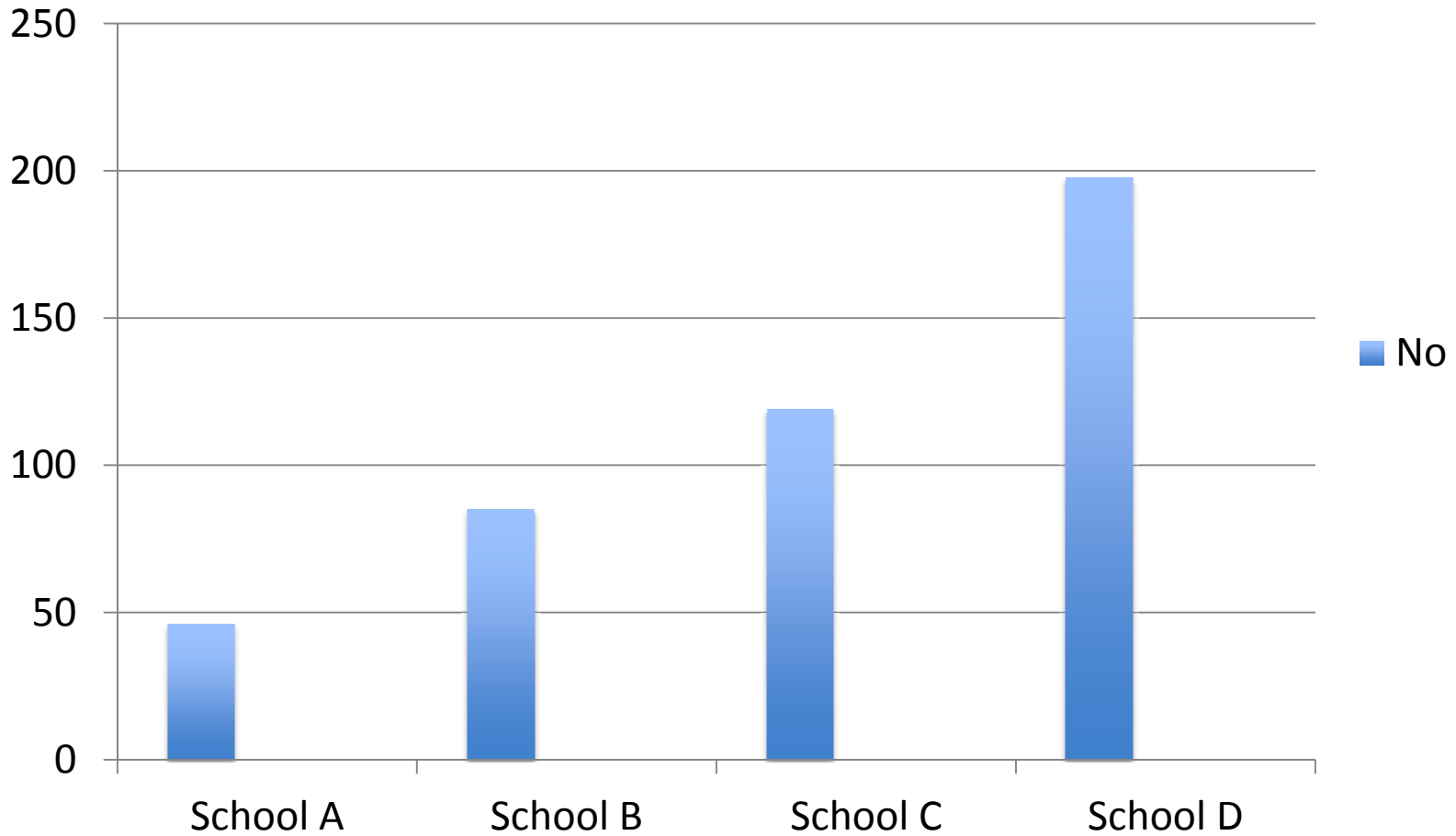
Study Schools

	Students Within 1 Mile	Average Distance to School	Development Pattern
School A	80%	1.0	Gridded Streets
School B	60%	0.9	Gridded Streets
School C	40%	1.9	Gridded Streets
School D	20%	2.7	Loop and Lollipop

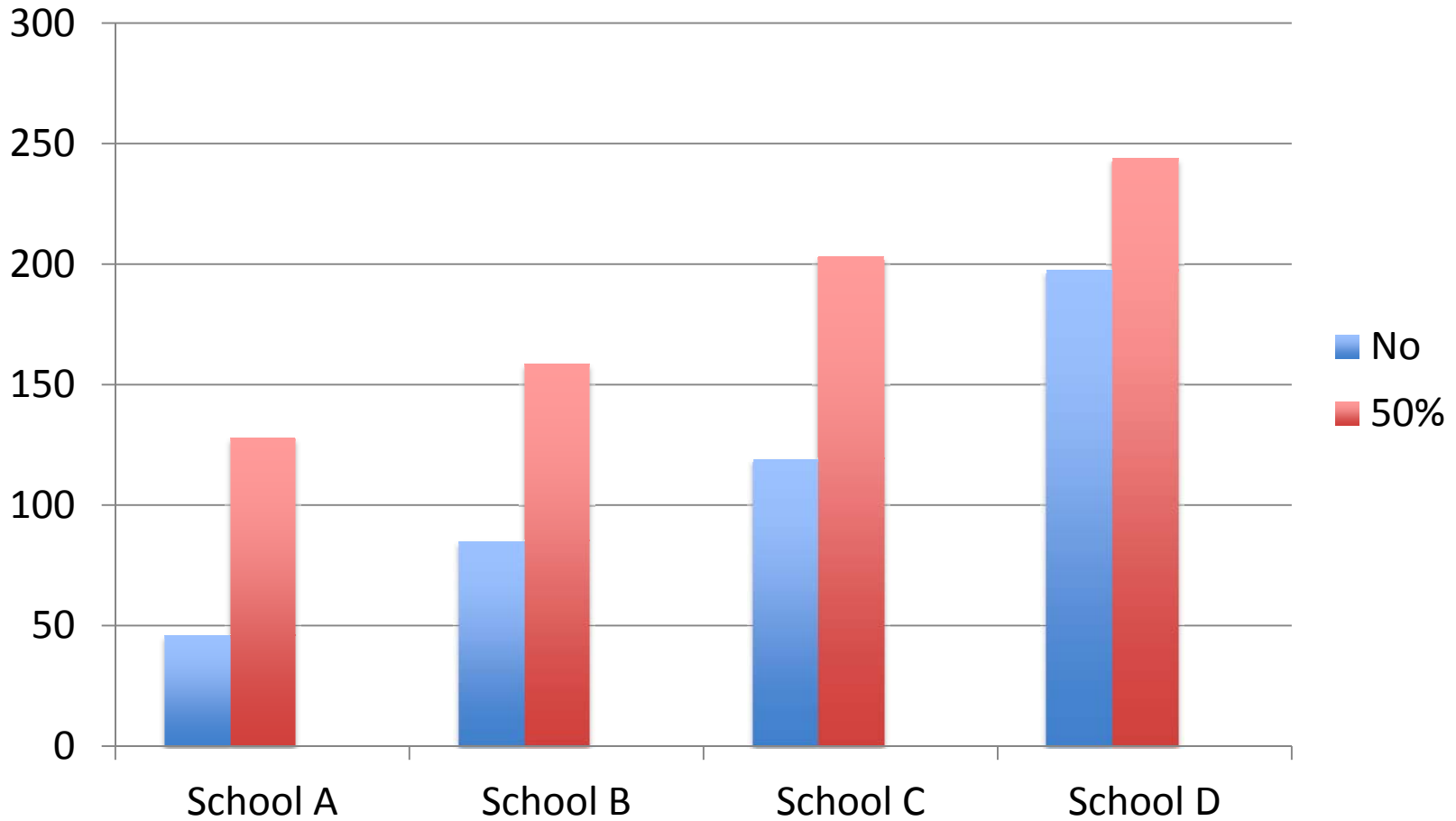
Number of Buses



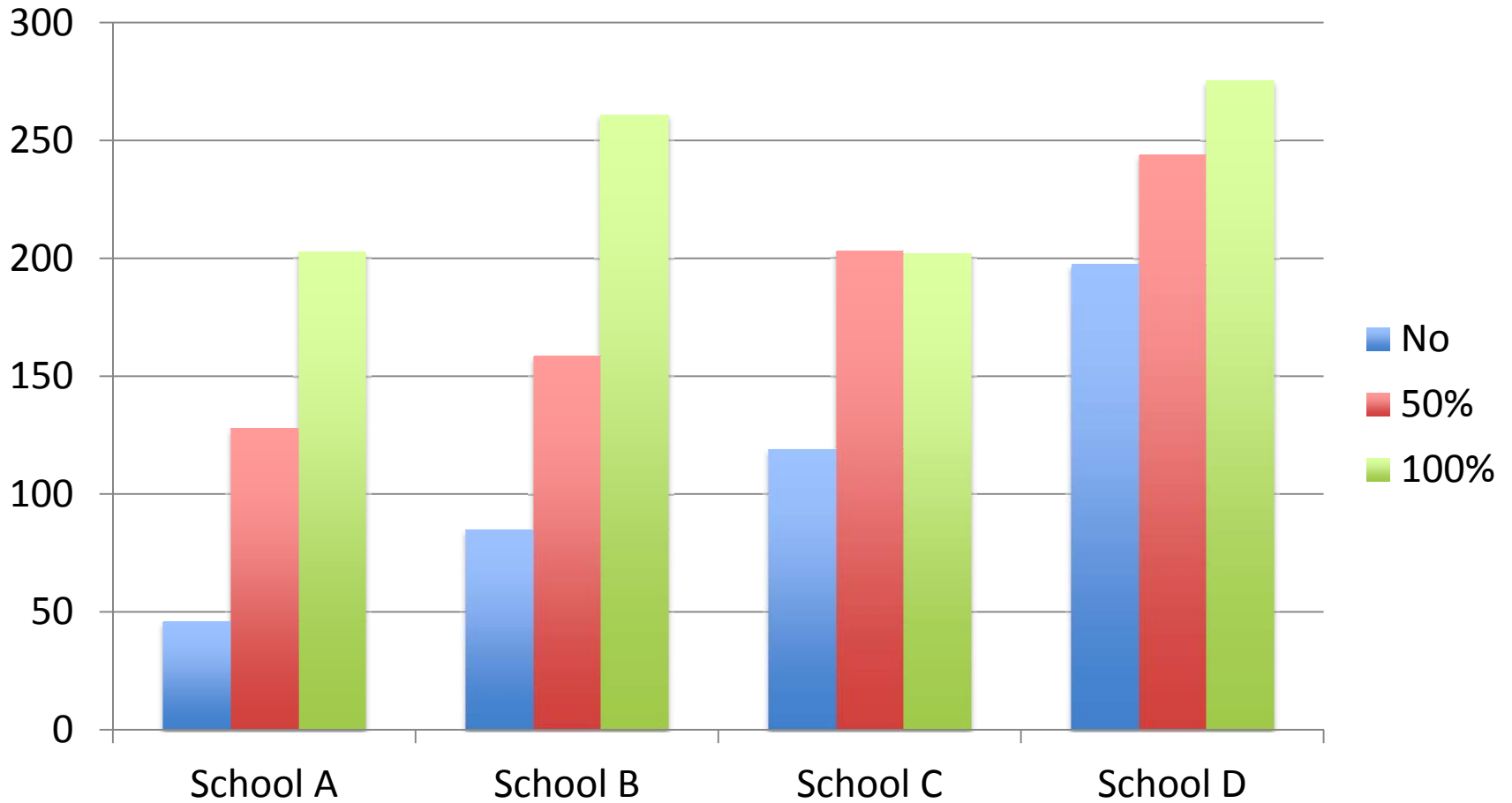
Cost per Enrolled Student



Cost per Enrolled Student



Cost per Enrolled Student



Potential Cost Savings

- Eliminating hazardous conditions around schools can save districts money
 - School A:
 - Save \$63,000 per year if 100% of students hazard bused
 - Save \$33,000 per year if 50% of students hazard bused
 - School D:
 - Save \$36,000 per year if 100% of students hazard bused
 - Save \$21,000 per year if 50% of students hazard bused
- Amount of savings varies with local context and school enrollment

Implications

- Investments in SRTS to eliminate hazardous walking conditions can pay for themselves
- Challenge to overcome institutional barriers
 - How to ‘capture’ the cost savings in order to pay for infrastructure improvements
 - Districts do not generally make improvements off the school site
 - Some districts do not pay for busing so no savings from making walking and biking safer
 - Potential to transfer costs to families



Questions