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Who Chooses? A Preliminary Analysis of Hartford Public Schools

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Who Chooses? A Preliminary Analysis of Hartford Public Schools

Matt DelConte '12 and Sushil Trivedi '12

Faculty Advisors: Professor Diane Zannoni and Professor Jack Dougherty

Cities Suburbs Schools Project at Trinity College

January 2012

- Tradeoffs between school achievement and distance from home.
- Public school choice options with two goals:
 - Increased racial integration between city and suburban districts
 - Greater School Accountability

Guiding Research Question:

Which Hartford students are more (or less) likely to submit an application to a different public school operated by the City?

Sources, methods and student-level confidentiality:

Data from HPS:

- | | |
|---------------------------------------|------------------------|
| A) Student address & demographics | ID + location + demog |
| B) Student achievement scores | ID + scores |
| C) Choice applicants (spring 10 only) | ID + school preference |
| D) School address, demog, scores | school location + data |

Key steps:

Geocode and calculate school-to-home distances

Add secret code + ID = maskedID

Merge data files with unique student ID

Calculate student data in relation to larger cohort

Analyze data and report group-level findings

Distribution of the Hartford Public Schools in the 4 School Zones
2009-10

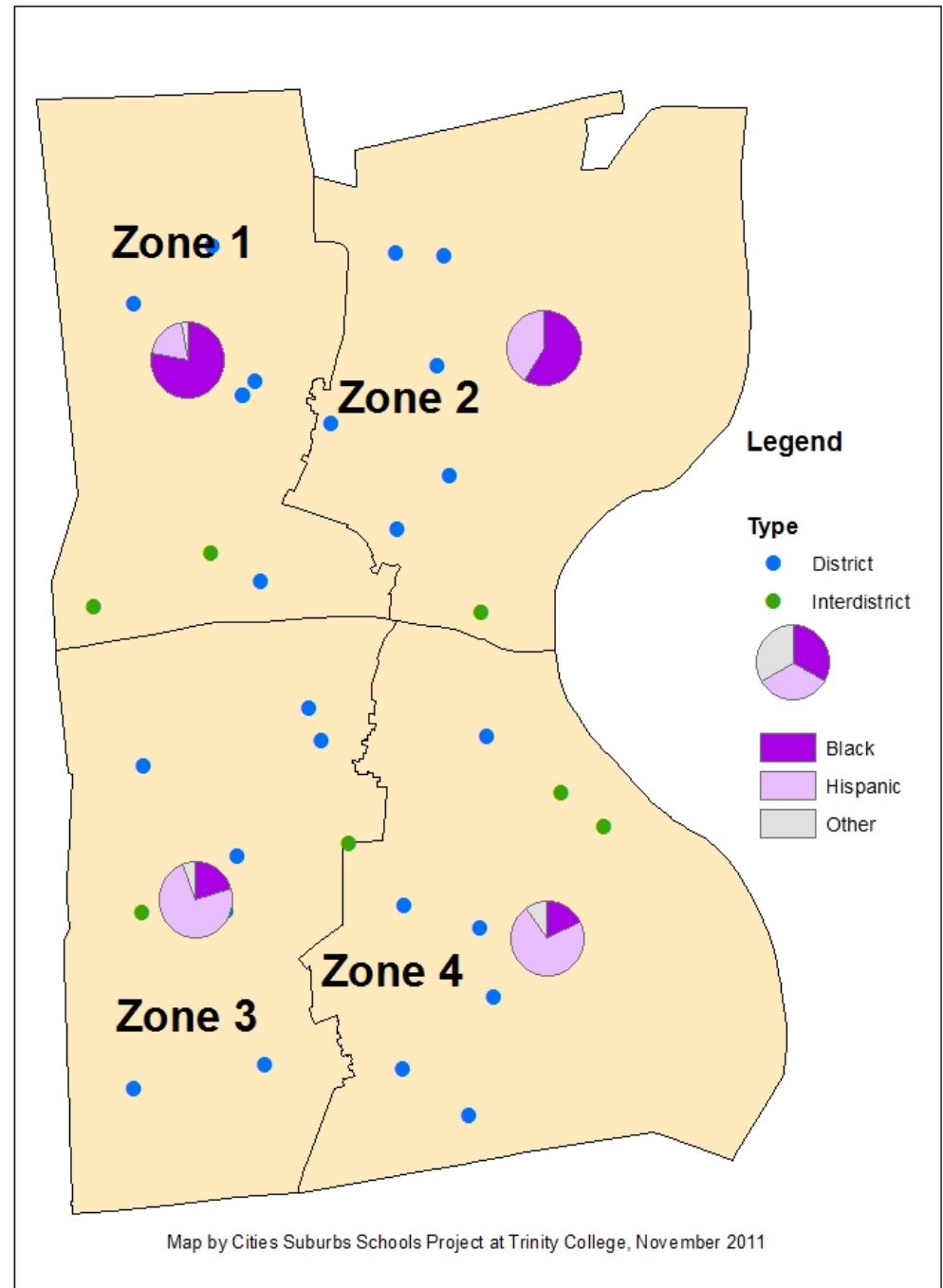
Where Students Live

North End

Zone 1: 78% Black, 19% Hispanic
Zone 2: 58% Black, 41% Hispanic

South End

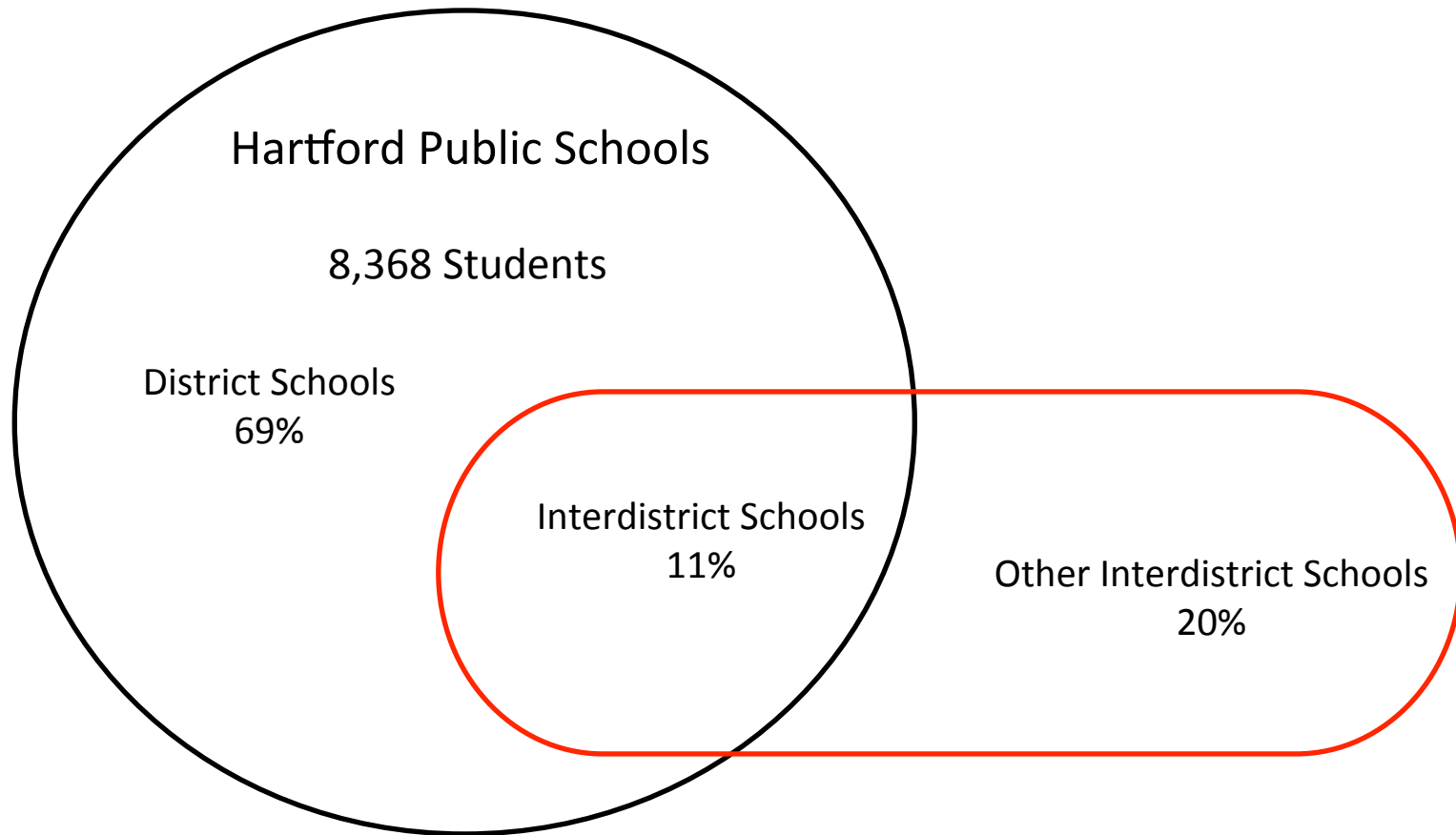
Zone 3: 20% Black, 74% Hispanic
Zone 4: 18% Black, 72% Hispanic



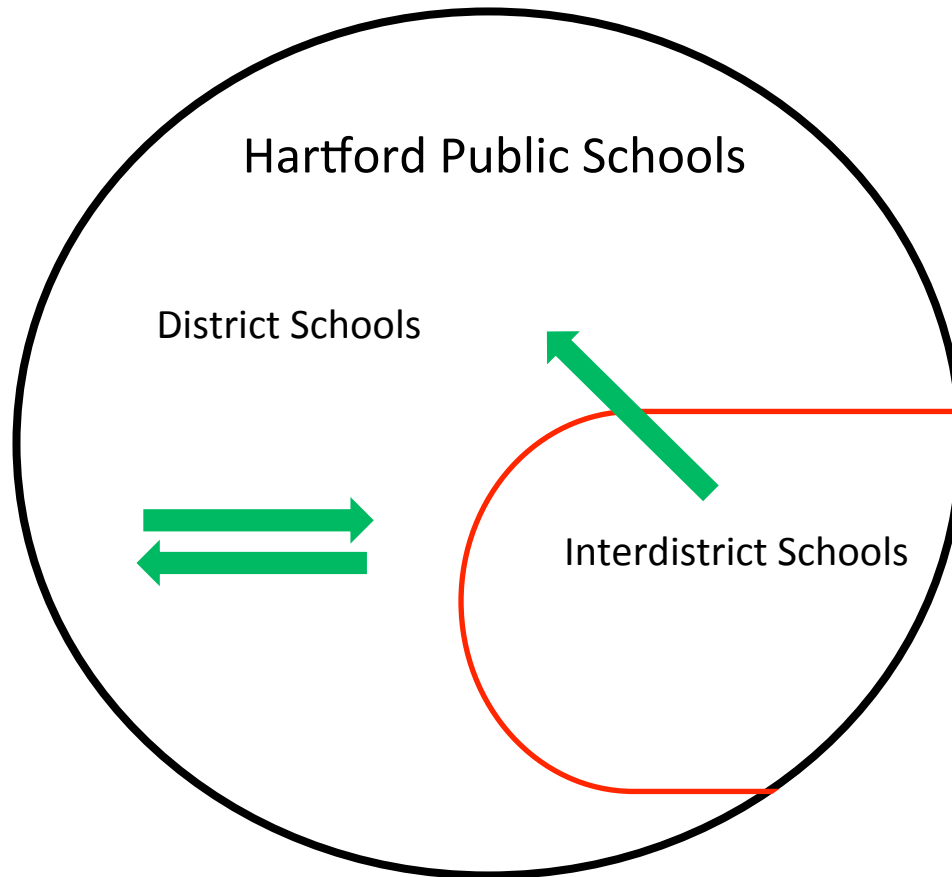
Where Students Reside and Attend School, G 3-7, 2009-10

Number of Students % Row		School Zone/Area				Total
		North End		South End		
		Zone 1	Zone 2	Zone 3	Zone 4	
Residence Zone/Area	Zone 1	994	76	60	37	1167
	North End	85.18	6.51	5.14	3.17	
	Zone 2	236	954	72	70	1332
	South End	17.72	71.62	5.41	5.26	
	Zone 3	307	43	1910	290	2550
	South End	12.04	1.69	74.90	11.37	
	Zone 4	69	35	170	1268	1542
	Total	4.47	2.27	11.02	82.23	
Total		1606	1108	2212	1665	6591
		24.37	16.81	33.56	25.26	

Percent of Hartford resident students, G3-8, by type of school, 2009-10



Data Constraints:
Limited Individual-Level Data and Movement between Schools



Which Hartford students who attend a district or interdistrict city public school in spring 2010 were more likely to voluntarily apply to another school run by the city?

Defining Our Population

Population of Hartford Resident Students, G3-8



Transitional Choosers



Potential Voluntary
Choosers



Voluntary Choosers



Non Choosers

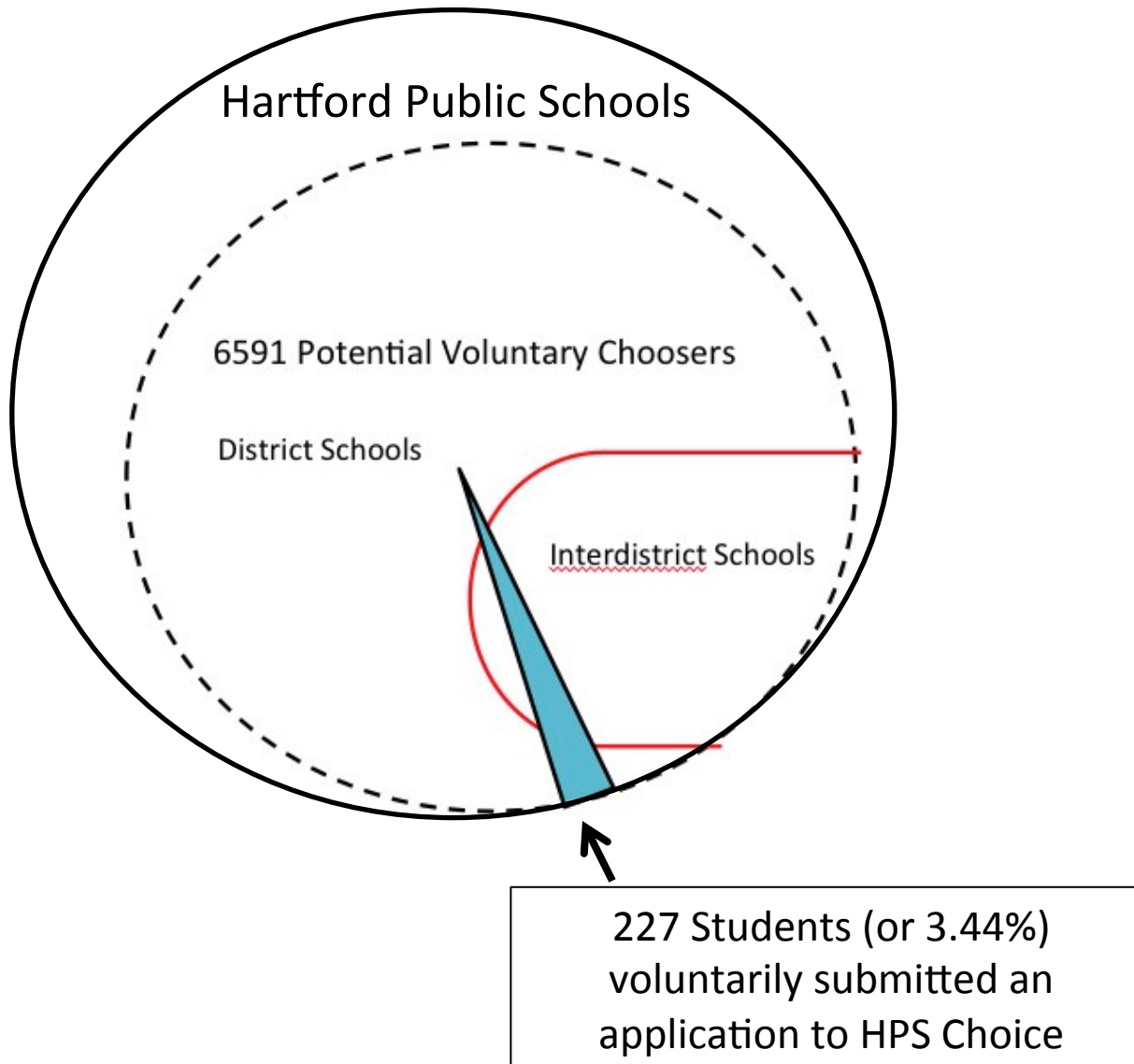
Potential Voluntary
Choosers:
Spring 2010

Those students who are currently enrolled in a Hartford Public School in grades 3-7 and are not in final grade level

- **Voluntary Choosers:** Those students who made applications to a city district school
- **Non-Choosers:** Those students who did not apply

	Potential Voluntary Choosers
	6591
% male students	51.1
% English language learners	19.1
% special education students	13.4
% Black students	37.6
% Hispanic students	56.8
%white	4.0
av composite level student score	2.7
av of students' school CMT Goal score	28.1
distance of current school from residence (miles)	.69 (.39)
distance of chosen school from residence (miles)	NA
% grade 3	20.2
% grade 4	19.9
% grade 5	20.8
% grade 6	19.2
% grade 7	19.9
% residence zone 1	17.7
% residence zone 2	20.2
% residence zone 3	38.7
% residence zone 4	23.4

Percent of Student Applicants Among Potential Voluntary Choosers:
Our Slice of the Pie



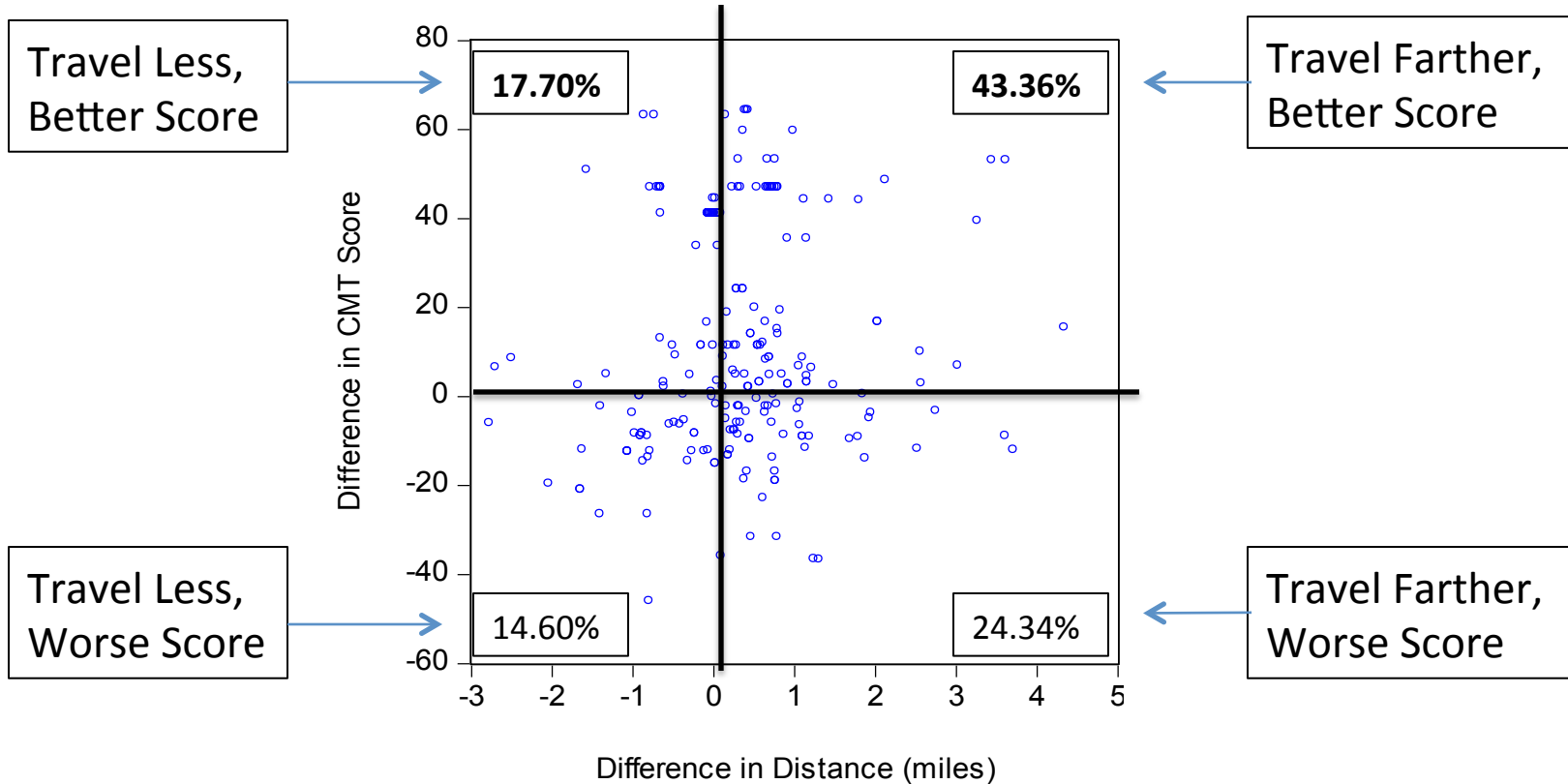
Potential Voluntary
Choosers:
Spring 2010

Those students who are currently enrolled in a Hartford Public School in grades 3-7 and are not in final grade level

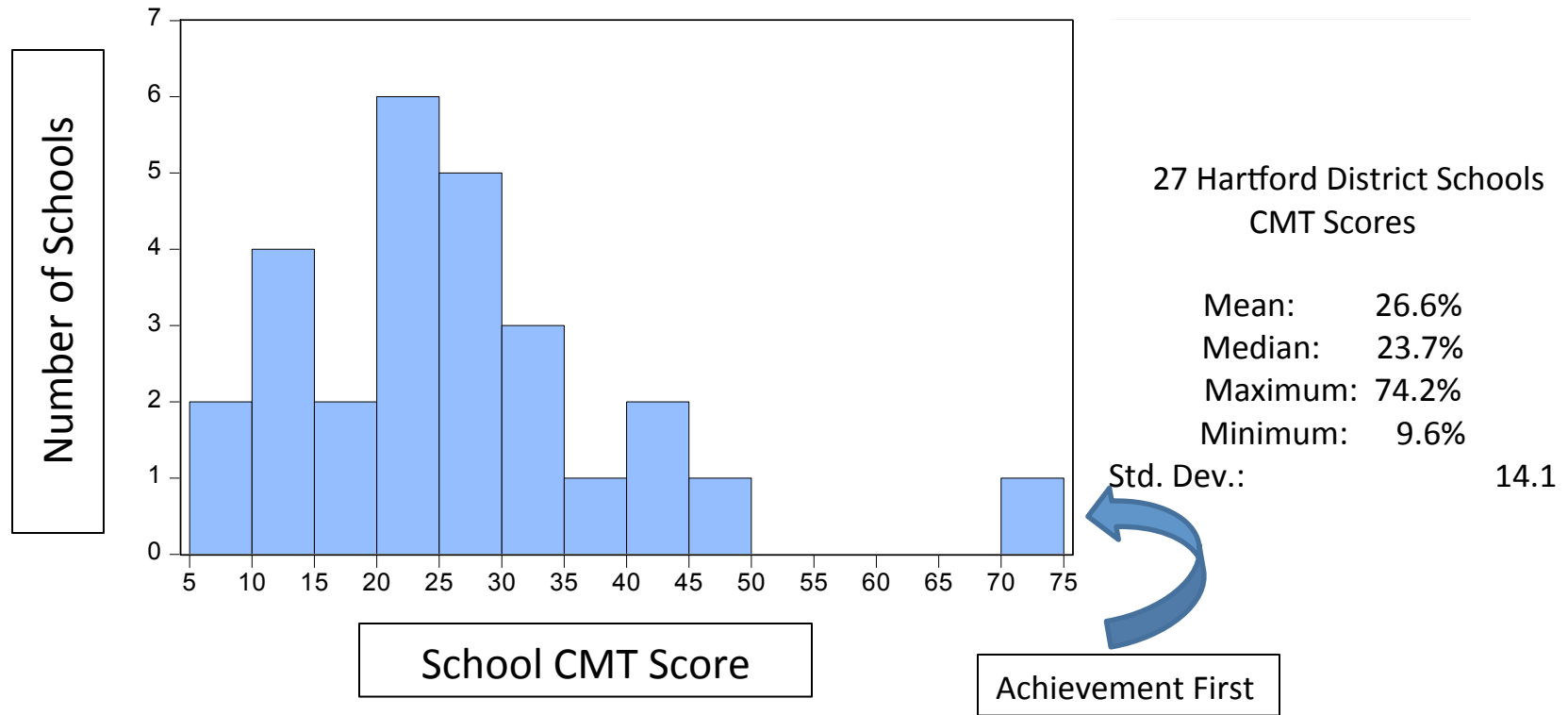
- **Voluntary Choosers:** Those students who made applications to a city district school
- **Non-Choosers:** Those students who did not apply

	Potential Voluntary Choosers	Non Choosers	Voluntary Choosers
	6591	6364	227
% male students	51.1	51.2	47.6
% English language learners	19.1	19.3	13.2
% special education students	13.4	13.5	11.0
% Black students	37.6	37.2	47.1
% Hispanic students	56.8	57.0	50.7
%white	4.0	4.1	1.3
av composite level student score	2.7	2.7	2.6
av of students' school CMT Goal score	28.1	28.2	27.5
distance of current school from residence (miles)	.69 (.39)	.69 (.39)	.81 (.52)
distance of chosen school from residence (miles)	NA	NA	1.15 (.90)
% grade 3	20.2	20.4	14.1
% grade 4	19.9	19.5	31.7
% grade 5	20.8	20.8	19.4
% grade 6	19.2	19.3	18.1
% grade 7	19.9	20.1	16.7
% residence zone 1	17.7	17.3	28.2
% residence zone 2	20.2	19.9	29.0
% residence zone 3	38.7	39.1	27.3
% residence zone 4	23.4	23.7	15.4

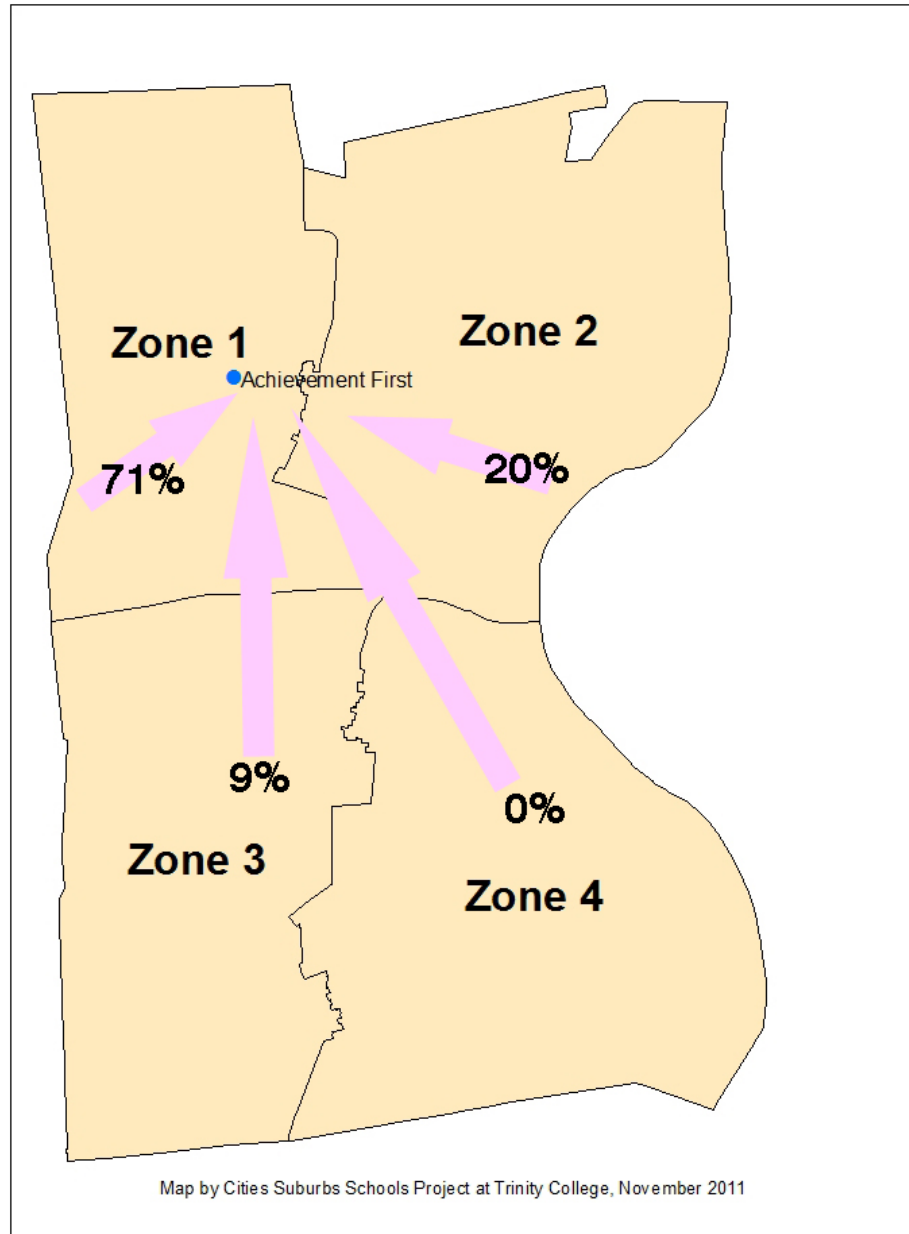
Relationship Between Distance and School CMT Score:
Among 227 Voluntary Choosers: Spring 2010



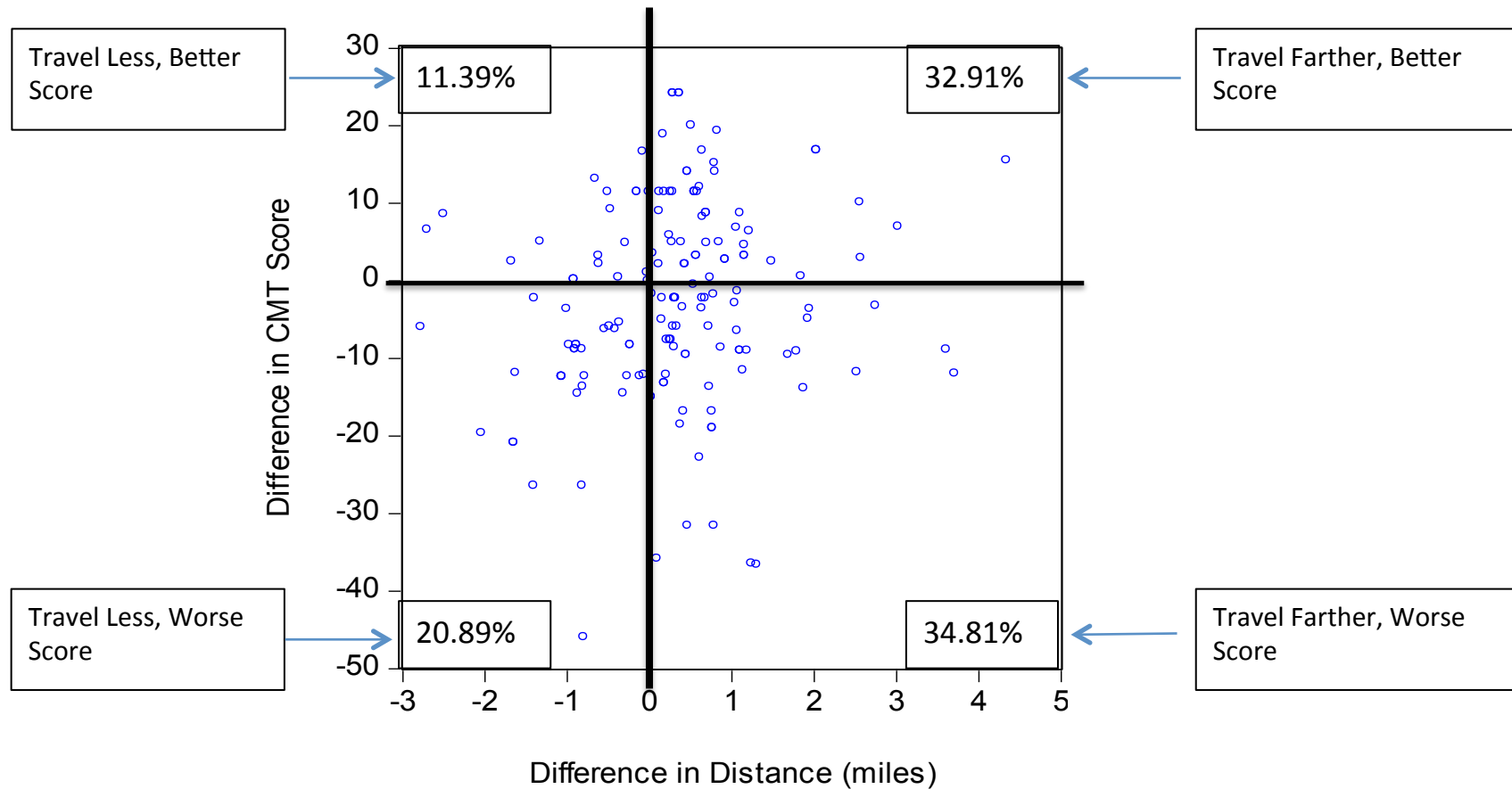
Distribution of % of Students Who Met the State Average on the Connecticut State Mastery test, Across 27 Hartford District Public Schools



Source of Voluntary Applications to Achievement First Hartford Academy by Zone:
Spring 2010



Relationship Between Distance and School CMT Score:
Among the 159 Voluntary Choosers Who Did **NOT** Apply to Achievement First Academy:
Spring 2010



Preliminary Take-Home Messages

Among 6,591 potential voluntary choosers in HPS grades 3-7 in 2009-10:

Only 227 (3.4%) submitted voluntary choice applications, and among these, the highest percentage (43%) are willing to travel farther for higher-scoring school

Nearly 1/3 applied to the highest performing HPS school in the City, Achievement First Academy, and most of those students came from the North End

But when excluding applicants to Achievement First, of remaining 159 voluntary choosers, the highest percentage (35%) are willing to travel farther for lower-scoring school

Potential next steps:

Additional years of HPS enrollment & choice data

Include student-level data from RSCO and other choice programs